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By P. KROPOTKIN

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MODERN SCIENCE AND ANARCHISM.

By Peter Kropotkin.

I.

THE ORIGIN OF ANARCHISM.

Anarchy does not draw its origin from any scientific researches, or from any system of philosophy. Sociological sciences are still far from having acquired the same degree of accuracy as physics or chemistry. Even in the study of climate and weather (in Meteorology), we are not yet able to predict a month or even a week beforehand what weather we are going to have; consequently, it would be foolish to pretend that with the aid of such a young science as Sociology is, dealing moreover with infinitely more complicated things than wind and rain, we could scientifically predict events. We must not forget either that scientific men are but ordinary men, and that the majority of them belong to the leisured class, and consequently share the prejudices of this class; most of them are even in the pay of the State. It is, therefore, quite evident that Anarchy does not come from universities.

Like Socialism in general, and like all other social movements, Anarchism originated among the people, and it will preserve its vitality and creative force so long only as it remains a movement of the people.

From all times two currents of thought and action have been in conflict in the midst of human societies. On the one hand, the masses, the people, worked out, by their way of life, a number of necessary institutions in order to make social existence possible, to maintain peace, to settle quarrels, and to practise mutual aid in all circumstances that required combined effort. Tribal customs among savages, the village communities, later on industrial guilds in the cities of the Middle Ages, the first elements of international law that these cities elaborated to settle their mutual relations; these and many other institutions were developed and worked out, not by legislation, but by the creative spirit of the masses.

On the other hand, there have always flourished among men, magi, shamans, wizards, rain-makers, oracles, and priests, who

were the founders and the keepers of a rudimentary knowledge of Nature, and of the first elements of worship (worship of the sun, the moon, the forces of Nature, ancestor worship). Knowledge and superstition went then hand in hand—the first rudiments of science and the beginnings of all arts and crafts being thoroughly interwoven with magic, the formulæ and rites of which were carefully concealed from the uninitiated. By the side of these earliest representatives of religion and science, there were also the experts in ancient customs—those men, like the *brehons* of Ireland, who kept in their memories the precedents of law. And there were also the chiefs of the military bands, who were supposed to possess the magic secrets of success in warfare.

These three groups of men formed among themselves secret societies for the keeping and transmission (after a long and painful initiation) of the secrets of their knowledge and crafts; and if at times they opposed each other, they generally agreed in the long run; they leagued together and upheld one another in different ways, in order to be able to command the masses, to reduce them to obedience, to govern them, and to make them work for them.

It is evident that Anarchy represents the first of these two currents, that is to say, the creative constructive force of the masses, who elaborated common-law institutions in order to defend themselves against a domineering minority. It is also by the creative and constructive force of the people, aided by the whole strength of modern science and technique, that to-day Anarchy strives to set up institutions that are indispensable to the free development of society, in opposition to those who put their hope in laws made by governing minorities.

We can therefore say that from all times there have been Anarchists and Statists.

Moreover, we always find that institutions, even the best of them, that were built up to maintain equality, peace, and mutual aid, become petrified as they grow old. They lose their original purpose, they fall under the domination of an ambitious minority, and gradually they become an obstacle to the ulterior development of society. Then individuals, more or less isolated, rebel against these institutions. But while some of these discontented, who rebel against an institution that has become irksome, strive to modify it for the common welfare, and above all to overthrow an authority, not only alien to the institution, but grown to be more powerful even than the institution itself—others endeavour to emancipate themselves from the mutual aid institutions altogether. They reject the tribal customs, the village community,

the guilds, etc., only to set themselves outside and above the social institutions altogether, in order to dominate the other members of society and to enrich themselves at society's expense.

All really serious political, religious, economic reformers have belonged to the first of the two categories; and among them there have always been individuals who, without waiting for all their fellow citizens, or even a minority of them, to be imbued with similar ideas, strove to incite more or less numerous groups against oppression, or advanced alone if they had no following. There were Revolutionists in all times known to history.

However, these Revolutionists appeared under two different aspects. Some of them, while rebelling against the authority that oppressed society, in nowise tried to destroy this authority; they simply strove to secure it for themselves. Instead of a power that had grown oppressive, they sought to constitute a new power, of which they would be the holders; and they promised, often in good faith, that the new authority, handed over to them, would have the welfare of the people at heart and would be their true representative—a promise that later on was inevitably forgotten or betrayed. Thus were constituted Imperial authority in the Rome of the Caesars, ecclesiastical authority in the first centuries of our era, dictatorial power in the decaying cities of the Middle Ages, and so forth. The same line of thought brought about royal authority in Europe at the end of feudal times. Faith in an emperor "for the people," a Cæsar, is not yet dead, even in the present day.

But side by side with this authoritarian current, another current asserted itself, every time the necessity was felt of revising the established institutions. At all times, from ancient Greece till nowadays, there were individuals and currents of thought and action that sought, not to replace any particular authority by another, but to destroy the authority that had grafted itself on popular institutions, without creating a new one to take its place. They proclaimed the sovereignty of both the individual and the people, and they tried to free the popular institutions from authoritarian overgrowths; they worked to give back full liberty to the collective spirit of the masses, so that popular genius might freely reconstruct institutions of mutual aid and protection, in harmony with new needs and new conditions of existence. In the cities of ancient Greece, and especially in those of the Middle Ages—Florence, Pskov, etc.—we find many examples of this kind of conflict.

We may therefore say that Jacobins and Anarchists have existed at all times among reformers and Revolutionists.

Formidable popular movements, stamped with the character of Anarchism, took place several times in the past. Villages and cities rose against the principle of government, against the supporters of the State, its tribunals, its laws, and they proclaimed the sovereignty of the rights of man. They denied all written law, and asserted that every man should govern himself according to his conscience. They thus tried to found a new society, based on the principles of equality, full liberty, and work. In the Christian movement in Judea, under Augustus, against the Roman law, the Roman State, and the morality, or rather the immorality, of that epoch, there was unquestionably much Anarchism. Little by little this movement degenerated into a Church movement, fashioned after the Hebrew Church and Imperial Rome itself, which naturally killed all that Christianity possessed of Anarchism at its outset, gave the Christian teachings a Roman form, and soon made of it the mainstay of authority, State, slavery, and oppression. The first seeds of "Opportunism" introduced into Christianity are already strong in the four Gospels and the Acts of the Apostles—or, at least, in the versions of the same that are incorporated in the New Testament.

The Anabaptist movement of the sixteenth century, which in the main inaugurated and brought about the Reformation, also had an Anarchist basis. But, crushed by those Reformers who, under Luther's rule, leagued with princes against the rebellious peasants, the movement was suppressed by a great massacre of peasants and the poorer citizens of the towns. Then the right wing of the Reformers degenerated little by little, till it became the compromise between its own conscience and the State which exists to-day under the name of Protestantism.

Thus, to summarise: Anarchism had its origin in the same creative, constructive activity of the masses which has worked out in times past all the social institutions of mankind—and in the revolts of both the individuals and the nations against the representatives of force, external to these social institutions, who had laid their hands upon these institutions and used them for their own advantage. Those of the rebels whose aim was to restore to the creative genius of the masses the necessary freedom for its creative activity, so that it might work out the required new institutions, were imbued with the Anarchist spirit.

In our times, Anarchy was brought forth by the same critical and revolutionary protest which gave rise to Socialism in general. However, one portion of the Socialists, after having reached the negation of Capitalism and of society based on the subjection of labour to capital, stopped in its development at this point. They did not declare themselves against what constitutes the real strength of Capitalism: the State and its principal supports—centralisation of authority, law, always made by a minority for its own profit, and a form of justice whose chief aim is to protect Authority and Capitalism. As to Anarchism, it did not stop in its criticism before these institutions. It lifted its sacrilegious arm, not only against Capitalism, but also against these pillars of Capitalism: Law, Authority, and the State.

II.

THE INTELLECTUAL MOVEMENT OF THE EIGHTEENTH CENTURY.

If Anarchism, like all other revolutionary movements, originated among the people during the tumult of strife, and not in a scientist's study, it is important, nevertheless, to know the position it occupies among the various currents of scientific and philosophic thought that exist at the present time. What is its attitude in respect to these divers currents? To which of them does it turn for support? Which method of research does it make use of in order to prove its conclusions? In other words, to what school of Philosophy of Law does Anarchy belong? With what current of modern science does it show most affinity?

In view of the infatuation for metaphysical economics which we have recently seen in Socialist circles, this question presents considerable interest. I will therefore try to reply to it as briefly and simply as possible, avoiding all difficult terms when they can be avoided.

The intellectual movement of the nineteenth century originated from the works written by Scotch and French philosophers in the middle and towards the end of the preceding century.

The awakening of thought which took place in those times stimulated these thinkers with the desire of encompassing *all* human knowledge in a general system—a System of Nature. Putting aside the scholastic and metaphysical views of the Middle Ages, they had the courage to conceive all Nature—the universe of stars, our solar system, our globe, the development of plants, of animals, and of human society on its surface—as a series of facts to be studied in the same way as natural sciences are.

Making use of the true *scientific* method, the inductive-deductive method, they undertook the study of all facts presented to us by Nature—whether belonging to the world of stars or of animals, or to that of beliefs or human institutions—absolutely in

the same way as a naturalist would study questions of physical science. They began by collecting facts, and when they ventured upon generalisations, they resorted to induction. They sometimes made hypotheses, but they attributed no more importance to these suppositions than Darwin attributed to his hypothesis concerning the origin of new species by means of natural selection in the struggle for existence, or that Mendéléeff attributes to his "periodic law." They looked upon them as suppositions affording a temporary explanation ("working hypotheses") and facilitating the grouping of facts, as well as their subsequent study; but these suppositions were not accepted before they were confirmed by applying them to a multitude of facts, and explained in a theoretical, deductive way; and they were not considered as natural "laws"—that is, *proved* generalisations—so long as they had not been carefully verified, and until the *causes* of their constant exactitude had been explained.

When the centre of the philosophic movement was transferred from Scotland and England to France, the French philosophers, with that perception of system which belongs to the French thinkers, began to construct all human sciences, both natural and historical, on a general plan and on the same principles. They attempted to construct "*generalised knowledge*"—that is, the philosophy of the Universe and its life—upon a strictly scientific basis. They consequently put aside all metaphysical constructions of the preceding philosophers, and explained all phenomena by the action of those same physical forces (that is to say, mechanical actions and reactions) that sufficed them to explain the origin and the evolution of the terrestrial globe.

It is said that when Napoleon I. remarked to Laplace that in his "Exposition of the System of the Universe" the name of God was nowhere to be found, Laplace answered: "I nowhere felt the need of that hypothesis." But Laplace did more. He never resorted either to the grand metaphysical *words* behind which lies the incomprehension or the obscure semi-comprehension of phenomena, together with the inability to consider facts in their concrete form, as measurable quantities. Laplace dispensed with Metaphysics as well as with the hypothesis of a Creator; and although his "Exposition of the System of the Universe" contains no mathematical calculations and was written in a style comprehensible to all educated readers, mathematicians could later on express each separate thought of that work in mathematical equations—that is to say, as conditions of equality between two

or more given quantities. So exactly had Laplace thought out every detail of his work.

What Laplace did for the celestial mechanics, the French philosophers of the eighteenth century did also for the study of most phenomena of life, as well as for those of the human understanding and feeling (psychology). They gave up the metaphysics that prevailed in the works of their predecessors and in those of the German philosopher, Kant.

It is known, indeed, that Kant, for instance, explained man's moral feeling by saying that it represents "a categorical imperative," and that a particular principle of behaviour is obligatory "if we conceive it as a *law* capable of universal application." But every word in this definition represents something nebulous and incomprehensible ("imperative" and "categorical," "law," "universal"!) that has been introduced instead of moral facts, known to us all, and of which he attempted to give the explanation.

The French Encyclopaedists could not be satisfied with such "grand words" by way of "explanations." Like their Scotch and English predecessors, when they wanted to explain whence man obtained his conception of good and evil, they did not insert, as Goethe said, "a little word where the ideas were wanting." They studied man himself; and, like Hutcheson (1725), and later on Adam Smith in his best work, "The Origin of Moral Feeling," they found that the moral sentiment of man derives its origin from a feeling of pity and of sympathy which we feel towards those who suffer; that it springs from our capacity of identifying ourselves with others; so much so that we almost feel physical pain when we see a child beaten in our presence, and our nature revolts at such behaviour.

Beginning with such every-day observations as these and with well-known facts, the Encyclopaedists arrived at broad generalisations. By this method they really *explained* moral feeling, which is a complex fact, by showing from which simpler facts it originates. But they never put, instead of known and *comprehensible facts*, *incomprehensible* and nebulous *words*, which explained absolutely nothing—such words as "imperative" and "categorical," or "universal law."

The advantage of this method is obvious. Instead of looking for an "inspiration from on high," instead of seeking for a supernatural origin, placed outside of humanity, for the moral sense, they said: "Here is your human feeling of pity and sympathy, inherited by man at his very origin, which man has

confirmed by his observations of his fellow creatures, and perfected little by little by his experience of social life."

We thus see that the thinkers of the eighteenth century did not change their method when they passed from the stars and physical bodies to the world of chemical reactions, or from the physical and chemical world to the life of plants and animals, to Man and to the development of economical and political forms of human society, and finally, to the evolution of the moral sense, the religions, and so on.

The method remained the same. To all branches of science they applied the *inductive method*. And neither in the study of religions, nor in the analysis of the moral sense and in that of thought altogether, did they find a single case in which their method failed, or in which another method was necessary. Nowhere did they find themselves compelled to have recourse to metaphysical conceptions ("immortal soul," "imperative and categorical laws" inspired by a superior being, etc.), or to any sort of purely dialectic method. And consequently they endeavoured *to explain the whole of the universe and all its phenomena in the same way, as naturalists.*

During those memorable years of awakening of scientific thought, the Encyclopaedists built their monumental "Encyclopaedia." Laplace published his "System of the Universe," and Holbach his "System of Nature." Lavoisier asserted the indestructibility of matter, and consequently of energy and movement. Lomonósoff, inspired by Bayle, sketched already at that time his mechanical theory of heat; Lamarck explained the origin of the infinitely varied species of plants and animals by adaptation to their divers surroundings; Diderot gave an explanation of moral feeling, of moral customs, of primitive and religious institutions, without having recourse to inspiration from above; Rousseau endeavoured to explain the birth of political institutions following upon a social contract—that is to say, by an act of human will. In short, there was not a sphere which they did not study by means of facts, by the same method of scientific induction and deduction verified by facts.

Of course, more than one error was committed in that great and bold attempt. There, where knowledge was wanting, erroneous and unconfirmed suppositions were sometimes made. *But a new method had been applied to the whole of human knowledge*, and, thanks to this new method, the errors themselves were easily recognised and corrected later on. By this means the nineteenth

century received the inheritance of a powerful instrument of research. And with this instrument, modern science was enabled to build our whole conception of the universe on a scientific basis, and to cast away the prejudices that obscured it, as well as the nebulous words which meant nothing, but, from fear of religious prosecution, were thrust in everywhere in order to get rid of difficult questions.

III.

THE REACTION AT THE BEGINNING OF THE NINETEENTH CENTURY.

In the earlier part of the nineteenth century, after the defeat of the Great Revolution, Europe passed, as is known, through a period of general reaction in the domain both of politics and of science and philosophy. The White Terror of the Bourbons in France; the Holy Alliance concluded in 1815 at Vienna between Austria, Germany, and Russia; mysticism and pietism at the Courts and in the upper classes, and State police everywhere, triumphed all along the line. However, with all that, the fundamental principles of the Revolution did not perish. The gradual liberation of the peasants and the town workers from a state of semi-serfdom in which they had been living till then, equality before the law, and representative government—these three principles promulgated by the Revolution and carried by the French armies all over Europe, as far as Poland and Russia, gradually made headway in France and elsewhere. After the *Revolution*, which had begun to preach the great principles of liberty, equality, and fraternity, the slow *evolution* began—that is to say, the slow transformation of institutions, and the application to every-day life of the ideas proclaimed in France in 1789–1793. Such a slow realisation, during a period of evolution, of the principles that have been proclaimed during the preceding revolutionary period, can even be considered as a general law of human development.

If the Church, the State, and Science trampled under their feet the banner on which the Revolution had inscribed its device: "Liberty, Equality, Fraternity"; if compromise with existing conditions, political and economical servitude, had become the watchword of the moment, even with philosophers of that period —Hegel in Germany and Cousin in France—nevertheless, the great principles of Liberty gradually began to penetrate into life.

True, that serfdom for the peasants all over Eastern Europe, and the Inquisition that had been abolished in Italy and Spain by the armies of the Revolution, were re-established. But a death-blow had been dealt to these institutions, and never since could they recover from it.

The liberation wave first reached Western Germany; then it rolled as far as Prussia and Austria in 1848; it spread over the peninsulas of Spain and Italy, and, flowing further eastwards, it finally reached Russia, where serfdom was abolished in 1861, and the Balkan States, where it ceased to exist in 1878. Slavery disappeared in North America in 1863.

At the same time, the idea of equality of all before the law, and that of representative government also, spread from West to East, and at the end of the nineteenth century Russia and Turkey alone remained under the yoke of autocracy—already weakened, however, and doomed to a certain death in a near future.*

More than that. On the line of demarcation separating the eighteenth century from the nineteenth, we already find the ideas of economic enfranchisement loudly advocated. Immediately after the overthrow of the King by the uprising of the people of Paris of August 10, 1792, and especially after the overthrow of the Girondins on June 2, 1793, there was, both in Paris and the provinces, an outburst of Communist feeling, leading to direct action in this sense in the revolutionary sections of the large cities and the municipalities of the small towns and villages over large portions of France.

The people proclaimed that the time had come when Equality must cease to be a shallow word: it must become *a fact;* and as the burden of the war that the Republic had to fight against the allied monarchies, fell especially upon the poor, the people forced the Commissaries of the Convention in the provinces to take Communistic measures.

The Convention itself was compelled by the people to take Communistic measures tending towards the "abolishing of poverty" and "levelling the fortunes." And after the bourgeois Republican party of the Girondists had been thrust out of power on May 31—June 2, 1793, the National Convention and the Radical bourgeois Club of the Jacobinists were compelled to agree to a series of measures tending to nationalise not only the land, but also all the commerce in the main necessaries of life.

* See the "Conclusion" of "The Great French Revolution."

This deeply seated movement lasted till July, 1794, when the bourgeois reaction of the Girondists, combining with the Monarchists, took the upper hand. But it was this movement which gave to the nineteenth century its specific character—the Communist and Socialist tendency of its advanced elements.

So long as that movement lasted, it found several spokesmen from among the people. But amongst the writers of the period there was none who would have been able to give a literary expression to its aspirations and foundations, and to advocate it in such a way as to produce a lasting impression upon the minds of his contemporaries.

It was only in 1793, in England, that William Godwin brought out his truly remarkable work: "An Enquiry into Political Justice and its Influence on Public Morality," which made him the first theoriser of Socialism without government—that is to say, of Anarchism; while Babeuf, aided and perhaps inspired by Buonarotti, came forward, in 1796, as the first theoriser of centralised Socialism, *i.e.*, of State Socialism.

Later on, developing the principles already put forth at the end of the preceding century by the people of France, came Fourier, Saint-Simon, and Robert Owen—the three founders of modern Socialism, representing its three principal schools; and later on, in the "forties," we have Proudhon, who, without knowing Godwin's work, laid anew the foundations of Anarchism.

The scientific basis of Socialism under both aspects, governmental and anti-governmental, was thus elaborated from the beginning of the nineteenth century with a wonderful richness of development. Unfortunately, this is too much ignored by our contemporaries. But the reality is that modern Socialism, which dates from the International Working Men's Association, founded in 1864, has outdistanced its founders by two points only—both, no doubt, quite essential. Modern Socialism has declared that its aims can only be brought into life by a social revolution—which Fourier, Saint-Simon and Robert Owen did not wish or dare to say; and it has completely broken with the conception of "Christ being a Socialist and revolutionist," which was so often paraded before 1848.

Modern Socialism has understood that to realise its aspirations a social revolution is absolutely necessary, not in the sense in which the word "revolution" is made use of when an "industrial revolution" or a "revolution in science" is spoken of, but in its exact concrete meaning: that of a general and sudden reconstruction of the foundations themselves of society. Moreover,

modern Socialism has ceased to mix its conceptions with certain innocent reforms of a sentimental order mentioned by a few Christian reformers. But this last—we must point out—had had already been done by Godwin, Fourier, and Robert Owen. As to centralisation and the cult of authority and discipline, which humanity owes to theocracy and to Imperial Roman law—all survivals of an obscure past—these survivals are still retained by many modern Socialists, who consequently have not yet reached the level of their two predecessors, Godwin and Proudhon.

It would be difficult to give here an adequate idea of the influence which reaction, having become supreme after the Great French Revolution, exercised upon the development of science.* Suffice it to remark that what modern science is so proud of to-day was already indicated, and often more than indicated—it was sometimes put forth in a definite scientific form—towards the end of the eighteenth century. The mechanical theory of heat; the indestructibility of movement (preservation of energy); the variability of species by the direct influence of surroundings; physiological psychology; the anthropologic comprehension of history, of religions, and of legislation; the laws of development of thought—in a word, the whole mechanical conception and synthetic philosophy (a philosophy that discusses the foundations of all physical, chemical, vital, and social phenomena as a whole) were already sketched and partly elaborated in the eighteenth century.

But when the reactionaries had got the upper hand, after the defeat of the Great French Revolution, for fully half a century, they stifled all these discoveries. Reactionary scientists represented them as "unscientific." On the pretext of "first studying facts" and accumulating "materials" for science in scientific societies, they even went so far as to repudiate any research which was not merely mensuration. Such remarkable discoveries as the elder Séguin's and, later on, Joule's determination of the mechanical equivalent of heat (the quantity of mechanical friction necessary in order to obtain a certain quantity of heat) were repudiated by these keepers of tradition. Even the Royal Society of Great Britain, which is the English Academy of Science, refused to print Joule's work, finding it "unscientific." As to

* I have discussed this question to some extent in a lecture delivered in England: "The Development of Science during the Nineteenth Century."

Grove's remarkable work on the unity of all physical forces, written in 1843—no attention was paid to it till 1856. One must read the history of science in the first half of the nineteenth century to realise how dense was the obscurity which enveloped Europe at that time.

The veil was suddenly rent when, towards the end of the "fifties," under the impulse of the revolutionary year of 1848, there began in Western Europe the movement which brought about Garibaldi's rising, the liberation of Italy, the abolition of slavery in America, liberal reforms in England, and a few years later the abolition of serfdom and the knout in Russia. The same movement overthrew in Europe the philosophical authority of Schelling and Hegel, and in Russia it gave rise to an open rebellion against intellectual serfdom and cringing to all sorts of authority, which rebellion was known by the name of Nihilism.

Now that we can look backwards upon the history of those times, it is evident for us that it was the propaganda of Republican and Socialist ideas in the "thirties" and "forties" of the nineteenth century, and the Revolution in 1848, which helped science to rend the bonds that had stifled it since the anti-revolution reaction had begun after the crushing, by the united Kings, of the revolutionary French Republic of 1789–1793.

Without entering into details, it will be sufficient to remember a few facts. Séguin, whose name has just been mentioned as the promoter of the mechanical theory of heat; Augustin Thierry, the historian who first laid the basis of the study of the rule of the people in the small Republics of the early Middle Ages, and of the Federalist ideas of those times; Sismondi, the historian of the free mediæval Republics in Italy, were followers of Saint-Simon—one of the three great founders of Socialism in the first half of the nineteenth century; and Alfred R. Wallace, who discovered at the same time as Darwin the theory of origin of species through natural selection, was in his youth a convinced partisan of Robert Owen; Auguste Comte was a follower of Saint-Simon; Ricardo, as well as Bentham, followed Owen; and the materialists Carl Vogt and George Lewes, as well as Grove, Mill, Herbert Spencer, and so many others, were under the influence of the Radical-Socialist movement in the "thirties" and "forties." From this movement they drew their scientific courage.

The appearance, in the short space of five or six years, 1856–1862, of the works of Grove, Joule, Berthelot, Helmholtz, Mendéléeff; of Darwin, Claude Bernard, Spencer, Moleschott,

and Vogt; of Lyell on the origin of man; of Bain, Mill, Burnouf, —the sudden appearance of this wonderful constellation of works produced a complete revolution in the fundamental conception of science. Science immediately ventured into new paths. Whole branches of learning were created with prodigious rapidity. The science of life (biology), that of human institutions (anthropology and ethnology), that of understanding, will and passions (physical psychology), the history of law and of religions on a scientific, anthropological basis, soon grew up under our very eyes, striking the mind by the boldness of their generalisations and the revolutionary spirit of their conclusions. What were mere general guesses in the eighteenth century now became facts, proved by the scales and the microscope, and verified by thousands of observations and experiments. Even the manner of writing completely changed. The men of science just mentioned, one and all, returned to the simplicity, the exactitude, and, I must say, the beauty of style which was characteristic of the followers of the inductive method, and of which the writers of the eighteenth century, since they had given up metaphysics, were such great masters.

It is impossible to predict in which direction science will henceforth go. As long as men of science depend on the rich and on Governments, as they do now, their science will inevitably bear the stamp of these influences, and a stagnant period, like the one in the first half of the nineteenth century, can certainly be produced once more. But one thing is certain. In science, such as it appears to-day, there is no necessity for the hypothesis which Laplace knew how to dispense with, nor the metaphysical "little words" which Goethe mocked at. We can already read the book of Nature, which comprises that of the development of both inorganic and organic life and of mankind, without resorting to a Creator, or to a mystical vital force, or to an immortal soul; and without consulting the trilogy of Hegel, or hiding our ignorance behind any metaphysical symbols whatever, endowed with a real existence by the writer. *Mechanical* phenomena, becoming more and more complicated as we pass from physics to the facts of life, are sufficient to explain Nature and all the intellectual and social organic life on our planet.

No doubt much that is unknown, obscure and not understood remains in the Universe, and we know that in proportion as we bridge over gaps in our knowledge, new chasms will open up. But we know no region in which it would be impossible for us to find an explanation of the phenomena if we turn to simple

physical facts which we see produced when two billiard balls meet, or when a stone falls; or to the chemical facts which we see going on around us. These mechanical facts have been sufficient till now to explain all the phenomena we have studied. They have never yet played us false, and we do not see the possibility of ever discovering a sphere in which mechanical facts would not meet our want. Nothing up till now justifies us in surmising the existence of such a domain.

IV.

COMTE'S POSITIVE PHILOSOPHY.

It is evident that while natural sciences were attaining, in the nineteenth century, the results mentioned in the previous chapter, it was necessary to attempt the construction of a synthetic philosophy which would embody the main results of all these sciences. Without wasting any more time on "substances," or on an "idea of the Universe," or on a "destination of life" and other symbolic expressions, with which philosophers used to entertain our fathers and grandfathers, and abandoning *anthropomorphism* —that is, the habit of attributing *human* qualities and intentions to Nature and to physical forces—it was time to attempt the construction of a philosophy which would represent a reasoned, unified, systematic summary of the whole of our knowledge. Such a philosophy, gradually rising from the simple to the complex, would state in broad lines the fundamental principles of the life of the universe, and would thus give a key to the comprehension of the whole of Nature. By this means it would furnish us at the same time with a powerful instrument of further research, helping us to discover new connections between things (new so-called "natural laws"), and inspiring us with confidence in the correctness of our conclusions, however different they might be from the current notions.

The necessity of a synthetic philosophy was already understood in the eighteenth century by the Encyclopaedists; by Voltaire in his admirable "Dictionary of Philosophy," which still remains a monumental work; by Turgot; by Saint-Simon, the founder of one of the three Socialist schools. Then, in the "forties" and "fifties" of the nineteenth century, Auguste Comte undertook, in his "Positive Philosophy," the same work, in a more scientific way, better suited to the recent progress in natural sciences; and Herbert Spencer followed, working out his "Synthetic Philosophy" after the wonderful revival of natural sciences in the middle of the nineteenth century.

As regards mathematics and exact sciences in general, Comte fulfilled his task in a most admirable way. It is also recognised now that he was perfectly right in introducing the science of life (biology) and the science of human societies (sociology) in the cycle of sciences included in his "Positive Philosophy"; and it is also known what a formidable influence his Positive philosophy exercised on most men of science and thinkers in the second half of the nineteenth century.

But why, it is asked by those who otherwise fully appreciate the work of the great philosopher—why was Comte so weak when he undertook, in his second great work—the "Positive Politics"—the study of human institutions, especially the modern ones, and the study of Ethics?

How could a man, with such a vast and *positive* mind as Comte's, finally become the founder of a *religion* and of a certain *worship*, as was the case with Comte in his declining days?

Some of his followers have tried to reconcile this last step of Comte with his previous work, maintaining that the philosopher had followed the same method in both his works—the "Positive Philosophy" and the "Positive Politics." But this is not correct. And this is why two such authorised and philosophical followers of Comte as Littré and John Stuart Mill reject the "Politics" and do not consider it even as a part of Comte's philosophy. They merely see in it the result of an already weakened intelligence.

And yet, the contradiction which exists between these two works of Comte—his "Positive Philosophy" and his "Positive Politics"—is most characteristic, and it throws light upon some of the most important questions of the present day.

When Comte had finished his "Cours de philosophie positive," he must certainly have noticed that he had not yet introduced into his philosophy the most essential question: the origin of moral sense in man and the influence of this sense on the life of man and of human societies. It was evidently necessary in a course of Positive philosophy to study the origin of this feeling, and to explain it by the same causes by which Comte had explained life in general. He had to show why man, without the interference of any supernatural forces, should feel the need of obeying this feeling, or at least of reckoning with it.

It is most striking that Comte was on the proper way, which was followed later on by Darwin when he tried to explain, in the "Descent of Man," the origin of moral sense in Man. Comte

wrote, indeed, in his "Positive Politics," several admirable passages which show that the extension of Sociability and Mutual Aid among animals, and their ethical importance, had not escaped his attention.*

But to draw out of these facts the necessary, *positivist* conclusions, biological knowledge was wanting at the time he wrote, and Comte himself was wanting already in the necessary boldness. So he took *God*, the divinity of all the positive religions, which man is requested to worship and to pray to in order to remain moral, and in his stead he put *Humanity* with a capital letter. He invited us to prostrate ourselves before this new divinity, and to address our prayers to it in order to develop our moral feelings.

Once this was done, once it was recognised as necessary that man should adore some being placed outside and above him, so as to keep the human animal in the paths of duty—the rest followed of itself. The ritual of Comte's religion was easily found in the rituals of ancient religions which came from the East.

In fact, Comte was bound to come to such a conclusion, once he had not recognised that the moral sense of man, like sociability and society itself, had a *pre-human origin;* once he did not see in it a further development of animal sociability, fortified in man by the observation of Nature and by accumulated experience of the life of human societies.

Comte had not recognised that the moral sense of man is as much dependent upon his real nature as all the physical features of his organisation are; that both are an inheritance derived from an extremely long process of evolution—a process which had lasted already many scores of thousands of years.

He had noticed the feelings of sociability and mutual sympathy among the animals; but, under the influence of the great zoologist Cuvier, who was then the greatest authority, he had not admitted what Buffon and Lamarck had foreseen—the variability of species. He did not recognise the uninterrupted process of evolution from animal to man. Consequently, he could not see that the moral sense of man is nothing else but a

* I had not noticed these passages at the time I published the earlier editions of this essay. It was a Positivist friend in Brazil who drew my attention to them, sending me at the same time the second great work of Comte; and I take this opportunity to express to him my warmest thanks. There are pages and pages, full of genius, in this work of Comte as well; and to re-read them now, with all the knowledge accumulated during one's life—at the invitation of a friend—was a profound pleasure.

further evolution of the mutual aid instincts evolved in animal societies long before the first man-like creatures had appeared on earth.

Therefore Comte could not realise—as we can and must realise now—that whatever the immoral acts of isolated men may be, the moral sense of mankind will perforce instinctively live in humanity so long as the human species does not enter a period of decay; that actions contrary to a moral sense derived from this natural source must of necessity produce reaction in all others, just as mechanical action produces a reaction in the physical world; that in this necessary reaction of men against the anti-sociable actions of some of them, lies the force which preserves the moral sense and the moral habits in human societies, as it preserves sociability and a certain habit of self-restraint in all sociable animals; that, finally, this force is infinitely more powerful than the orders of any religion, or any law-makers. Not having admitted that much, Comte was compelled therefore to invent a new divinity, Humanity, and a new worship, in order that this worship should always retain man in the paths of moral life.

Like Saint-Simon, like Fourier, he thus paid a tribute to his Christian education. Without admitting a struggle between a Good and an Evil principle (both of equal strength), and without man turning to the representative of Good to strengthen himself against the representative of Evil—without this, Christianity cannot exist. And Comte, imbued with this Christian idea, returned to it as soon as he had to deal with the question of morality and the means of strengthening it in man's feelings. The cult of Humanity was to be the instrument with which to remove from man the nefarious power of the Evil One.

V.

THE AWAKENING IN THE YEARS 1856-1862.

Auguste Comte had failed in his study of human institutions, and above all in his study of the origin of morality. But we must not forget that he wrote his "Positive Philosophy" and "Positive Politics" long before the years 1856–1862, which, as was already remarked, suddenly broadened the horizon of science and rapidly raised the level of the general conceptions of educated men.

The series of epoch-making, fundamental works which appeared in the course of those five or six years, dealing in quite a new way with all the principal branches of knowledge, accomplished so complete a revolution in all our ways of looking at Nature, at life in general, and at the life of human societies, that no similar revolution has ever taken place in the whole history of science in the last twenty centuries.

What the Encyclopaedists had dimly perceived or only foreboded, what a few only of the greatest minds of the first part of the nineteenth century had succeeded in disentangling with so much difficulty, became all of a sudden a matter of general knowledge—a certitude, rich in results. And this new knowledge was won, by the application of the inductive scientific method, with such a fullness and in so comprehensive a form that henceforth every other method of research appeared incomplete, false, and purposeless.

Let us ponder for a moment over these results, the better to be able to appreciate the next attempt at a synthetic philosophy which was made by Herbert Spencer.

In the course of those six years, Grove, Clausius, Helmholtz, Joulé, and a whole phalanx of physicists and astronomers—including Kirchhoff, who, by his wonderful discovery of the spectral analysis, enabled us to find out the chemical composition of the stars—broke the spell that forbade till then to men of

science the domain of wide generalisations. And in a few years they proved to evidence the *unity of the whole inorganic world*, including the most distant stars—that is, the most distant suns surrounded by their planets.

Henceforth it became impossible to speak any longer of those mysterious "fluids"—caloric, electric, magnetic—to which physicists had previously resorted for explaining the different physical forces. Now, it was proved to evidence that all the physical phenomena, including light, heat, electricity, and magnetism, are the results of those same mechanical vibrations of the molecules which produce the waves of the sea and the vibrations of a bell or a tuning-fork.

At the same time we learned the means of *measuring* these invisible vibratory movements of the molecules—to weigh, so to say, their energy—just as we measure the energy of movement of a stone that falls from a certain height, or of a railway train in motion.

It was demonstrated, moreover, always during those memorable years, that the celestial bodies furthest removed from us—even the myriads of suns which we see in the Milky Way—are composed of those same simple bodies, or elements, of which all other bodies on the Earth are composed, and that absolutely the same vibrations of molecules are going on there, with the same physical and chemical results, as on our planet. The movements themselves of the massive celestial bodies which travel through space according to the laws of universal gravitation, are in all probability but the resultant of all these vibrations that are transmitted in all directions for billions and trillions of miles, through the interstellar space of the Universe.

These same caloric and electric vibrations suffice to explain all chemical phenomena. Chemistry is but another chapter of molecular mechanics. And even plant and animal life in its countless manifestations is but an exchange of molecules (or rather atoms in the molecules) in that vast series of unstable, easily decomposed chemical bodies of which the living tissues of all animated beings are built up. Life is but a series of chemical decompositions and recompositions in very complex molecules: a series of fermentations due to chemical, inorganic ferments.

Moreover, during those same years it was discovered (to be proved more fully later on, in 1890–1900) that the life-processes in the living cells of the nervous system also consist of chemical

permutations in the molecules of the cells, and that the transmission from one nerve-cell to another of molecular vibrations and of chemical permutations gives us a mechanical explanation of the nervous life in animals and of the transmission of irritations in plants.

The result of all these researches is immense. Owing to them, we can now, without leaving the domain of purely physiological facts, understand how images and impressions are produced in our brain, and engraved on it; how they act upon one another, and how they give rise to conceptions and ideas. We can also understand the so-called "association of ideas"—that is, how new impressions revive the old ones.

An insight is thus gained into the very mechanism of thought.

We are certainly very far yet from knowing all that is to be known in this direction. Science only just now frees itself from the metaphysics which strangled it, and only scouts the borderland of this great domain. But a beginning has been made. A solid foundation has already been laid for further research. The ancient division into two separate domains, which the German philosopher Kant endeavoured to establish—the domain of phenomena which we examine "in time and space" (the domain of physics), and the other, which we are able to examine only "in time" (the mental phenomena)—this division has now to disappear, And to the question that was put one day by the materialist Russian physiologist, Professor Syetchenoff: "To which department does psychology belong, and who has to study it?" the answer has already been given: "It belongs to physiology, and it is the physiologist who has to study it, by the physiological method!" In fact, the recent researches of physiologists have already thrown infinitely more light on the mechanism of thought, on the origin of impressions, on their fixation in the memory and their transmission, than all the subtle discussions with which metaphysicians have entertained us for centuries.

Metaphysics is thus beaten now, in the stronghold itself which formerly belonged to it without contest. The domain of psychology, in which it formerly considered itself invincible, has also been invaded by natural sciences and by materialist philosophy, which has caused our knowledge in this branch to increase with a rapidity entirely unknown in former times.

However, among the works that appeared during these five or

six years, there was none which exercised so deep an influence as the "Origin of Species," by Charles Darwin.

Already Buffon in the eighteenth century, and Lamarck in the very first years of the nineteenth, had ventured to maintain that the different species of plants and animals peopling the Earth do not represent immutable forms. They are variable, and vary continually under the influence of their surroundings. The family likeness which we recognise in different species belonging to a particular group is a proof, they said, that these species descended from a common ancestor. Thus, the different kinds of buttercup which we find in our prairies and in our marshes must be the descendants of one and the same ancestral kind—descendants that have grown dissimilar in consequence of a series of changes and adaptations they have been subjected to in the varied circumstances of their existence. Likewise, the present species of wolf, dog, jackal, fox, did not formerly exist; but in their stead there was once a species of animals which in the course of ages gave birth to the several branches representing now the wolves, the dogs, the jackals, and the foxes.

But in the eighteenth century it was dangerous to profess such "heresies." For far less than that the Church had already threatened to prosecute Buffon, and he had been compelled to recant his statements about the geological evolution of the Earth. The Church at that time was still very powerful, and the naturalist who dared to uphold heresies offensive to her was threatened with prison, torture, or the madhouse. That is why the "heretics" spoke with so much prudence all through the first half of the nineteenth century. But now, in the second half of the century, after the revolutions of 1848, Darwin and Wallace could bravely affirm the same heretic teaching, and Darwin had also the courage to add that man, too, was the product of a slow physiological evolution; that he drew his origin from a species of animals which gave birth both to man and the now-living apes and monkeys; that the "immortal mind" and the "moral sense" of man had developed in the same way as the intelligence and the social instincts of a chimpanzee or an ant.

We know what thunderbolts were hurled by the Elders of the Churches at Darwin, and especially at his courageous, learned and intelligent apostle, Huxley, who made most of those Darwinian conclusions which chiefly alarmed the priests of all religions.

The struggle was hot, but the Darwinians emerged victorious, and since then a new science—biology, the science of life in all its manifestations—has grown up under our very eyes. The

origin of all species by descent is now an established fact. Some of the clergy themselves accept it, and try to reconcile Evolution with Revelation.

Darwin's work gave at the same time a new key and a new method of investigation for the better understanding of many other groups of phenomena: the life of physical matter, the life of organisms, and the life and evolution of societies. The idea of a continuous development—of a progressive Evolution and a gradual adaptation of beings and societies to new conditions, in proportion as these conditions become modified—this idea found a far wider field to work in than that of merely explaining the origin of new species. When it was applied to the study of Nature in general, as well as to the study of man and his social institutions, it opened up quite new horizons and made it possible to explain some of the most difficult problems in the domain of all branches of knowledge. Taking this principle, so rich in consequences, as a basis, it was possible to reconstruct, not only the history of organisms, but also the history of human institutions.

Biology, in the hands of Herbert Spencer, showed us how all the species of plants and animals inhabiting our globe were able to develop, starting from a few very simple organisms that existed on the earth at the beginning; and Haeckel was able to draw a sketch of a likely genealogical tree of the different classes of animals, man included. This was already a great result; but it also became possible to lay a solid scientific foundation to the history of human customs, beliefs, and institutions—a knowledge the want of which was so much felt by the philosophers of the eighteenth century and called for by Auguste Comte. Now, the history of human societies, institutions and religions can be written from the point of view of adaptive Evolution, without having recourse to the metaphysical formulas of Hegel, and without resorting to "innate ideas," to revelation from above, or to Kant's "substances." We can reconstrue it without appealing to those formulas which were death to the spirit of research, and behind which the same ignorance was always hidden—the same old superstition, the same blind faith disguised under sonorous words.

Aided by the works of naturalists on the one hand, and, on the other, by the works of Henry Maine and his followers, who applied the same inductive method to the study of primitive institutions and to the law codes that originated from them,

it was possible during the last thirty years to put the history of human institutions on as firm a basis as the history of the development of any species of plants or animals.

Of course, it would be very unjust to forget the work that was already accomplished as early as the "thirties" of the nineteenth century by the school of Augustin Thierry in France, and that of Maurer and the "Germanists" in Germany, of which Kostomaroff, Byelayeff and so many others were the followers in Russia. The method of evolution had certainly been applied since the Encyclopaedists to the study of customs and institutions, as well as languages. But to obtain correct and really scientific results became possible only since men of science learned to treat the facts of history in the same way as naturalists examine the gradual development of the organs of a plant or that of a new species.

In their own day, the metaphysical formulas no doubt had helped the thinkers to make some approximate generalisations. They helped especially to rouse numbed minds. They stimulated thought by their sometimes poetical indications of the unity of Nature and its never-ceasing life. At a time when reaction was supreme, as it was in the first decades of the nineteenth century, when the inductive generalisations of the Encyclopaedists and their English and Scotch predecessors were nearly forgotten, and when it would have needed moral courage to speak of the unity of physical and "spiritual" nature in the face of triumphant mysticism—in those dark days the poetical conceptions of some French thinkers and the nebulous metaphysics of the Germans upheld at least the taste for generalisations.

But the generalisations of that time, being established either by the dialectic method or by means of a half-conscious induction, were on account of that despairingly vague. The first—the dialectic ones—were mostly based on naïve assertions, similar to those made by Greeks in ancient days, when they affirmed that planets *must* travel through space along circles, because the circle is the most perfect curve. If the naïve character of such assertions and the total absence of proofs did not strike everyone, it was only because it was concealed by the vagueness of the arguments and nebulous reasonings, as well as by an obscure and grotesquely heavy style. As to the second, *i.e.*, those generalisations which had at their origin a semi-conscious induction, they were always built upon a series of extremely limited observations—like the hasty generalisations of Weismann, built

upon a very narrow basis of facts, which have caused some stir of late among our biologist contemporaries. The value of the hypothetical generalisations based upon such half-conscious induction was easily exaggerated, and they were represented as indisputable *laws*, while they were mere guesses, mere suppositions, or embryos of generalisations which needed to be subjected to the most elementary test by facts.

And finally, all these loose generalisations were expressed in a way so abstract and cloudy—as, for instance, the famous "thesis, antithesis, and synthesis" of Hegel—that they left the fullest liberty to draw from them the most arbitrary practical conclusions. In fact, one could deduce from them (this was really done) the revolutionary spirit of Bakunin and the Dresden Revolution, the revolutionary Jacobinism of Marx, and the "Recognition of what exists," which led so many "right wing" Hegelians to make "Peace with reality"—that is to say, to indulge in the glorification of autocracy. I hardly need mention here the economic errors into which the Marxists have lately fallen, owing to their predilection for the dialectic method and economic metaphysics, as against the study of the actual facts of economic life.

VI.

HERBERT SPENCER'S SYNTHETIC PHILOSOPHY.

When the study of Anthropology—*i.e.*, the study of the physiological evolution of man and the growth of his institutions and religious beliefs—began to be carried on with the methods that are applied in all other natural sciences, it became possible at last to delineate in its essential outlines the history of mankind, and to do away with metaphysics which had obstructed till then the study of history, just as Biblical tradition had obstructed the progress of geology.

One might have thought, therefore, that when Herbert Spencer undertook in his turn the construction of a synthetic philosophy in the second half of the nineteenth century, he would have done so without falling into the errors that had characterised the "Positive Politics" of Auguste Comte. And yet, even though Spencer's "Synthetic Philosophy" is a great step in advance (it does not lead to a religion or to a new form of worship), yet in its sociological part it contains fallacies quite as misleading as those that were embodied in Comte's Positive philosophy.

The fact is, that when Spencer came to the psychology of societies (after having admirably examined the substance of our knowledge in physical sciences, biology, and psychology), he did not remain faithful to his rigorous scientific method, and did not dare to face the consequences to which such a method would have brought him. Thus, to take one single example, Spencer fully recognised that land should never be private property; because the owner of the soil, profiting by his right to raise the land-rent, may hinder his fellow men from obtaining from the soil all they could get out of it by means of intensive culture; or, he may keep the land uncultivated, waiting till its value be raised by the work of other people around him. Spencer readily recognised that such a system is noxious to society and full of dangers. But while recognising this as regards land, he did not venture to use the same arguments as regards other accumulated riches, such as mines or docks, not to mention workshops and factories. In natural sciences he did not hesitate to come to opinions absolutely contrary to those that had been maintained for centuries under the influence of religious beliefs. But here he had not the courage to accept the logical conclusions of his own reasonings.

Or else, to take another striking example, he loudly raised his voice against State interference with the life of society; he even gave to one of his works a title representing in itself a whole revolutionary programme: "The Man *versus* the State." But little by little, under cover of safeguarding the *protective* functions of the State, he entirely reconstructed the State as it exists to-day, with but few very timid limitations.

These contradictions and many others besides could, of course, be explained by the fact that Spencer planned the sociological part of his philosophy under the influence of the English Radical movement of the "forties," long before he had written that part which dealt with natural sciences. In fact, he published his "Social Statics" in 1851, that is to say, when the anthropological study of human institutions was still in its infancy. But, be it as it may, the result was that, like Comte, Spencer did not undertake the study of human institutions as a naturalist, for their own sake, without preconceived ideas borrowed from other domains, outside science.

Moreover, as soon as he reached the philosophy of societies—that is, Sociology—Spencer began to adopt a new method, and a very treacherous one: the method of resemblances, or analogies, which he evidently did not resort to in his study of the facts of physical nature. The consequence was that this method allowed him to justify a mass of preconceived ideas. Altogether, up till now we have not yet a synthetic philosophy that would have been built up on the same foundation for both natural and sociological sciences.

It must also be said that for the comprehension of the primitive institutions of the savages—which represent a substantial portion of all Sociology—Spencer was the least suited man. In this respect he even exaggerated a failing that is frequent with Englishmen: a want of understanding for the morals and customs of other nations.—"We English are Roman Law people, while the Irish are Common Law people; that is why we do not understand one another," I was told once by James Knowles, a very intelligent and well-informed man.—The misunderstanding is still greater when an Englishman has to deal with those who are described as "inferior races." This was Spencer's case. He was quite incapable of understanding the savage's respect for his tribe and tribe-rule; or the hero of an Icelandic saga, who considers "blood-revenge" as a holy duty; or the inner life of a mediaeval city, which, though it was full of

strife within, was nevertheless, and precisely for that reason, a life of wonderful progress. The conceptions of Right and Law which prevailed at those stages of civilisation were entirely strange to Spencer: he saw nought but savagery, barbarism and cruelty in that life.

Besides—and this is perhaps even more important—Spencer, like Huxley and so many others, had completely misunderstood the real meaning of the "struggle for existence." He represented it to himself, not only as a struggle between different species of animals (wolves preying upon hares, many kinds of birds living on insects, and so forth), but also as an acute struggle *within each species*, among all the individuals of the species. In reality, however, such a struggle does not exist—certainly not to the extent imagined by Spencer—even among animals, and still less so among the most primitive savages. But once it was admitted by the philosopher, all his sociological conceptions suffered from that false supposition.

How far Darwin himself was responsible for this erroneous conception of the struggle for existence, we need not discuss here. But it is certain that when he published his "Descent of Man," twelve years after the "Origin of Species," he already took a far broader and a more metaphorical conception of the struggle for existence than that of a hard struggle between all the individuals within each species, which he had taken in his first great work in order to prove the importance of natural selection for the origin of new species. In his second great work, "The Descent of Man," he wrote, on the contrary, that those species which contain the greatest number of mutually sympathetic individuals have the greatest chance of surviving and of leaving a numerous progeny, and thus he entirely upset his first conception of the struggle for life. And nevertheless, Spencer maintained it in full.

The chapters which Darwin gave in "The Descent of Man" to the development of human ethics out of the sociable habits of the animal ancestors of man, might have been the starting-point for working out a conception, exceedingly rich in consequences, of the nature and evolution of human societies (Goethe had already divined it); but these chapters of Darwin passed unnoticed. It was only in 1879, in a lecture given by the zoologist Kessler, that we find a clear conception of the relations existing in Nature between the struggle for existence and mutual aid. "For the *progressive* evolution of a species," the Russian professor

said, giving a few examples, "*the law of mutual aid* has far more importance than the law of mutual struggle."

A year later, Lanessan delivered at Paris a lecture, "The Struggle for Existence and Association for Struggle"; and soon after that Büchner published his work, "Love," in which he showed the importance of *sympathy* among animals as a step towards developing the first conceptions of morality; but he gave to filial love and compassion too prominent a position, and thereby uselessly limited his field of research.

It was easy for me to give (in "Mutual Aid: a Factor of Evolution") further proof of Kessler's remarkable idea, and to extend it to man. I had only to base my conclusions as regards mutual aid among animals on the accurate observations of Nature by the best field zoologists, and my views on the history of human institutions—on a mass of modern historical research. Among animals, mutual aid is, in fact, not only the most efficacious weapon in the struggle for existence against the hostile forces of Nature and against other inimical species, but *it is also the principal instrument of progressive evolution.* Even to the otherwise weakest animals it guarantees longevity (and consequently accumulation of experience), security for breeding their offspring, and intellectual progress. This is why those animal species which most practise mutual aid not only better survive in the struggle for life than those which lead an isolated life, but they also occupy a higher position in their own respective classes (of Insects, Birds, or Mammals) by the superiority of their physical structure and their intelligence.

This fundamental fact of Nature was not noticed by Spencer until 1890. He accepted, on the contrary, an acute struggle for life within each species as an established fact which needed no proof—as an axiom. A struggle to the death "with beak and claw" for each bit of food. "Nature stained with the gladiator's blood," such as Tennyson represented it, was his conception of animal life. It was only in 1890 that he began to understand, up to a certain point, the importance of mutual aid, or rather the sentiment of mutual sympathy in the animal world, and began to collect facts and make observations in this direction. But even then, primitive man always remained for him the ferocious beast of his own imagination, which exists only on the condition of seizing the last bit of food from the mouth of its neighbours.

It is evident that once he had adopted a premise as fallacious as this, Spencer could not construct his synthetic philosophy without falling into a series of errors.

VII.

THE FUNCTION OF LAW IN SOCIETY.

Spencer is not the only one who fell into these errors. Remaining true to the teaching of Hobbes, the philosophers of the nineteenth century persisted in looking at primitive men as wild beasts living in small isolated families and fighting one another for their food and their womenfolk, till a kindly authority settled in their midst in order to enforce peace. Even a naturalist like Huxley went on repeating the same assertion as Hobbes, and wrote (in 1885) that in the beginning men lived by fighting "one against all," until, thanks to a few superior beings, "the first society was founded." (See his article, "The Struggle for Existence: a Programme.") Thus, even a learned Darwinian like Huxley had no idea that society, far from having been created by man, existed among animals long before his appearance on the earth. Such is the force of an established prejudice.

If we endeavour to trace the history of this prejudice, we soon find that it derived its origin from religion and churches. The secret societies of wizards, rain-makers (shamans—half sorcerers and half priests), later on, the Assyrian and Egyptian priests, and still later on, the Christian priests, always endeavoured to persuade man that "the world is steeped in sin"; that only the kindly intervention of the shaman, the wizard, the saint, and the priest hinders the powers of evil from taking possession of man; that they alone can induce an angry divinity not to crush man by sin and then punish him for his ill deeds.

Primitive Christianity vainly endeavoured to weaken this prejudice as regards priests; but the Christian Church, taking a stand on the words of the Gospels concerning "eternal fire," only strengthened it. The idea itself of God the Son coming to die on earth, in order to redeem the sins of humanity, confirmed that way of thinking. And this is just what permitted the "Holy Inquisition" to subject their victims to the most atrocious tortures and to grill them on a slow fire: thus they were offered a chance of repentance and salvation from eternal suffering. Moreover, it was not only the Roman Catholic Church which

acted in this way: all Christian Churches, faithful to the same principle, vied with one another in the invention of new sufferings in order to correct those stuck fast in "vice." Even now, nine people out of ten believe still that natural occurrences, such as droughts, earthquakes, and contagious diseases, are sent from on high by some kind of divinity to bring back sinning humanity to the right path.

At the same time, the State in its schools and universities maintained, and continues to maintain, the same faith in the natural perversity of man. Its teachers and professors everywhere teach the necessity of having a power above man, and of implanting a moral element in society by means of punishments, inflicted for violation of "moral law," which by some cunning they identify with written law. To convince men that this authority is necessary is a question of life and death for the State; because, if men began to doubt the necessity of strengthening moral principles by the strong hand of authority, they would soon lose their faith in the high mission of their rulers.

In this manner all our religious, historical, juridical, and social education is imbued with the idea that human beings, if left to themselves, would revert to savagery; that without authority men would eat one another; for nothing, they say, can be expected of the "multitude" but brutishness and the warring of each against all. Men would perish if above them soared not the elect: the priest and the judge, with their two helpmates—the policeman and the hangman. These saviours prevent, we are told, the battle of all against all; they inculcate respect of law, they teach discipline, and lead men with a high hand, till nobler conceptions shall have developed in their "hardened hearts," so that the whip, the prison, and the scaffold may be less necessary than they are to-day.

We laugh at one of those kings who, having been driven away in 1848, said on leaving: "My poor subjects! without me they will perish!" We mock at the English tradesman who is persuaded that his compatriots descend from the lost tribe of Israel, and therefore it is their destiny to impose good government on "inferior races."

But do we not find in all nations this same exaggerated self-appreciation amongst most of those who have learned something?

And yet a *scientific* study of the development of societies and institutions brings us to quite different views. It proves that

usages and customs created by mankind for the sake of mutual aid, mutual defence, and peace in general, were precisely elaborated by the "nameless multitude." And it was these customs that enabled man to survive in his struggle for existence in the midst of extremely hard natural conditions. Science demonstrates to us that the so-called leaders, heroes, and legislators of humanity have added nothing to history beyond what had already been worked out by the Customary Law. The best of them have only put into words and sanctioned the institutions that already existed by habit and custom; while the great number of these would-be benefactors only strove to destroy the unwritten customary law whenever it hindered the establishment of their personal authority, or else they remodelled the popular institutions to their own advantage and to that of their caste.

As long ago as those remote ages which are lost in the dark night of the Glacial period, men lived in societies. And in these societies a whole series of institutions were worked out and rigidly observed, in order to make possible the life in common. And later on, through the whole course of human evolution, the same creative power of the nameless multitude always worked out new forms of social life, of mutual aid, of guarantees of peace, as soon as new conditions arose.

On the other hand, modern science clearly demonstrates that law, whatever its origin—whether represented as derived from a divinity or from the wisdom of a lawgiver—has never done more than to widen the sphere of application, to fix, or rather to crystallise in a permanent form, such customs as already were in existence. All the codes of antiquity were nothing else but collections of customs and habits, put in writing in order to preserve them for the coming generations. But in doing so, the lawmakers always added to these customs some new rules—rules of inequality and servile submission of the masses, in the interest of the armed rich and the warlike minorities.

"Thou shalt not kill," the law of Moses said; "thou shalt not steal, thou shalt not bear false witness." But to these excellent moral rules, generally recognised at that time, it added: "Thou shalt not covet thy neighbour's wife, nor his slave, nor his ass," by which for a long time it legalised slavery, and put woman on a level with slaves and beasts of burden.

"Love your neighbour," said Christianity later on; but it hastened to add by the mouth of the Apostle Paul: "Slaves obey your masters," and "No authority but from God's will"—thus legitimising and deifying the division between masters and slaves,

and perpetuating the authority of the scoundrels who ruled in Rome at that time.

Even the Gospels, while teaching the sublime idea of no revenge for offences, which is the essence of Christianity, speak all the while of a God of Vengeance, and by this means teach vengeance.

At a still later epoch, we find the same again in the codes of the so-called barbarians: the Gauls, the Longobards, the Alemanni, the Saxons, the Slavonians, after the fall of the Roman Empire. These codes legalised a custom, excellent no doubt, which began to spread at that time: that of paying *compensation* for wounds and murders, instead of practising the previously very general law of retaliation, which said: "Eye for eye, tooth for tooth, blow for blow, and life for life." By so doing, the barbarian codes certainly represented an improvement on the law of blood-revenge, which had been the code of tribe life; but at the same time they also established the division of free men into classes—a distinction which was hardly perceptible yet at the time when law came in to enforce it, but was reinforced by it.

So much compensation—it was said now in the Barbarian codes—has to be paid for a slave (to the master of the slave); so much, much more, for a freeman; and so much, very much more, for a chieftain. In this last case the compensation was so high that it meant lifelong slavery for the murderer. Now, the primary idea of these distinctions, established by custom, was no doubt that the family of a chieftain, killed in a brawl, lost by his death far more than the family of an ordinary freeman who would have been killed in the same circumstance; consequently, the first had a right to a higher compensation than the second. But in *legalising* this custom, the code established a division of men into *classes*, and so firmly established it that up till now we have not been able to get rid of it.

And the same obtains in all legislation, even in that of our own times—the injustice and oppression that were practised at a particular period being handed down by law to the later periods. The tyranny of the Persian Empire was thus transmitted to Greece, that of Macedonia to Rome; and the oppression and cruelty of the Roman Empire and the Eastern autocracies and theocracies were transmitted to the young barbaric States when they began to be formed, and even to the Christian Church. By means of Law the past fettered the future.

All the guarantees that are necessary to the life of society, all

the forms of social life elaborated within the clans and tribes, the village communities, and later on in the mediaeval cities; all forms of relations between different tribes and clans, and between the city-republics of the mediaeval age, which became later on the first elements of International Law; all forms of mutual support and of the defence of peace, including tribunals and juries, were elaborated by the creative genius of the nameless multitude; while all *laws*, from the most ancient ones till those of our own times, have always been composed of two very different elements. One of them strengthened (and fixed) certain habits and customs, already recognised as useful; while the other element of all laws was an *addition* to these customs—very often a mere malicious wording of an existing custom—the aim of which was to implant or strengthen the nascent authority of the kinglet, the nobleman, the soldier and the priest, to consolidate and sanction their power and their authority.

These are the conclusions to which we are led by the scientific study of the development of societies, a study that has been carried on during the last twenty or thirty years by a great number of conscientious scientists. It is true that men of science do not themselves dare to draw conclusions as heretical as those mentioned above; but the thoughtful reader of necessity comes to these conclusions after reading their works.

VIII.

PLACE OF ANARCHISM IN MODERN SCIENCE.

What place, then, does Anarchism occupy in the great intellectual movement of the nineteenth century?

The answer to this question is already apparent in what has been said in the preceding chapters. Anarchism is a conception of the Universe based on the mechanical* interpretation of phenomena, which comprises the whole of Nature, including the life of human societies and their economic, political, and moral problems. Its method is that of natural sciences, and every conclusion it comes to must be verified by this method if it pretends to be scientific. Its tendency is to work out a synthetic philosophy which will take in all facts of Nature, including the life of societies, without, however, falling into the errors of Comte and Spencer, which were due to reasons already pointed out.

It is evident that on this account Anarchism necessarily has to give its own answers to all questions put before us by modern life, and it unavoidably takes up an attitude with regard to them quite different from that of all political parties, as also, up to a certain point, of the Socialist parties, which have not yet freed themselves from old metaphysical fictions.

Of course, the elaboration of a complete mechanical conception of Nature and human societies is at present hardly begun in its sociological part, devoted to the life and evolution of societies. Nevertheless, the little that has been done, at times even unconsciously, already bears the character which we have indicated. In the philosophy of Law, in the theory of morals, in political economy, and in the historical study of nations and institutions, Anarchism has already proved that it would not content itself with the metaphysical conclusions of old, but would look for a naturalistic basis.

It refuses to be imposed upon by the metaphysics of Hegel, Schelling, and Kant, by the expositors of Roman or Canonical

* It would have been better to say "kinetic," but this expression is less known.

law, by learned professors of State law, or by the political economy of metaphysicians; and it endeavours to clearly understand all questions arising in these spheres, basing itself on a mass of work done from the naturalist's point of view during the last thirty or forty years.

In the same way as the metaphysical conceptions of a Mind of the Universe, a Creative Force of Nature, a Loving Attraction of Matter, an Incarnation of the Idea, an Aim of Nature, a Reason for its Existence, the Unknowable, and so forth were gradually abandoned by the materialist (mechanical, or rather kinetic) philosophy, and the embryos of generalisations found hidden behind these words were translated in the concrete language of facts, so do we endeavour now to proceed when we approach the facts of life in societies.

When metaphysicians wish to persuade a naturalist that the intellectual and emotional life of man is unrolled "according to the inherent laws of the Spirit," the naturalist shrugs his shoulders and continues his patient study of the phenomena of life, of intelligence, and of emotions and passions, in order to prove that they may all be reduced to physical and chemical phenomena. He endeavours to discover their natural laws.

Likewise when an Anarchist is told that, according to Hegel, "every evolution represents a thesis, an antithesis, and a synthesis"; or that "the aim of Law is to establish Justice, which represents a materialisation of the Supreme Idea"; or yet again, when he is asked: "What is, then, according to you, the Aim of Life?" the Anarchist likewise shrugs his shoulders. And he asks himself: "How is it possible that with the present development of natural science there should still exist such antiquated beings who go on believing in these 'words and words'? Men speaking still the language of the primitive savage, who used to anthropomorphise Nature by representing it as something governed by beings having human forms!"

Anarchists are not to be deceived by such sonorous phrases, as they know that these phrases only serve to cover, either ignorance —that is to say, incomplete investigation—or, which is far worse, superstition—the fear before the unknown. Therefore, when they are addressed in this language, they pass on without paying attention to it, and continue their study of social conceptions and institutions, past and present, always following the method of the naturalist.

And they find that the development of the life of societies is

in reality infinitely more complex (and far more interesting) than we should be led to believe if we judged by metaphysical formulas.

We have heard of late very much about the dialectic method, recommended to us by Social Democrats in order to elaborate the Socialist ideal. But we no more admit this method than would natural science. The dialectic method reminds the modern naturalist of something very antiquated that has had its day and is forgotten, happily long since forgotten by science. No discovery of the nineteenth century, in mechanics, astronomy, physics, chemistry, biology, psychology, or anthropology, has been made by the dialectic method. All the immense acquisitions of the century are due to the use of the inductive-deductive method—the only scientific method. And as man is a part of Nature, as his personal and social life is a natural phenomenon, just as the growth of a flower, or the evolution of life in societies of ants or bees—there is no reason why we should, when we pass from the flower to man, or from a village of beavers to a human city, abandon the method which till then has been so useful, and look for another method in the realms of metaphysics.

The inductive-deductive method which we employ in natural sciences has so well proved its efficacy that the nineteenth century has been able to advance science in a hundred years more than it had progressed before during two thousand years. And when men of science began, in the second half of the century, to apply the same method to the study of human societies, never did they stumble upon an obstacle which rendered its rejection necessary, or made advisable a return to the mediaeval scholasticism resuscitated by Hegel. Besides, when some naturalists, doing honour to their bourgeois education, and pretending to be followers of the scientific method of Darwin, told us: "Crush whoever is weaker than yourself: such is the law of Nature!" it was easy for us to prove, first, that this was *not* Darwin's conclusion, and, using the same scientific method, to show that these scientists were on the wrong path: that such a law does not exist, that Nature teaches us a very different lesson, and that their conclusions were in nowise scientific.

The same is true as regards the assertion which economists tried to make us believe: namely, that the inequality of fortunes is "a law of Nature," and that capitalistic exploitation represents the most advantageous form of social organisation. By applying

the method of natural sciences, we are enabled to prove that the so-called "laws" of bourgeois social science, including present political economy, are not at all laws, but simple suppositions or affirmations that nobody has ever attempted to verify. In fact, some of their most essential would-be laws crumbled to pieces as soon as they were submitted to the test of numeric data, taken from a study of real life.

One word more. Scientific research is only fruitful on condition that it has a definite *aim*—that it was undertaken with the intention of finding an answer to a plain question well put. And every inquiry is the more fruitful the clearer we see the relation existing between the question and the fundamental lines of our general conception of the Universe. The better it fits in with this general conception, the easier is its solution.

Well then. The question put by Anarchism might be expressed in the following way: "*Which social forms best guarantee in such and such societies, and in humanity at large, the greatest sum of happiness, and therefore the greatest sum of vitality?*" "Which forms of society are most likely to allow this sum of happiness to increase and develop in quantity and quality—that is to say, will enable this happiness to become more complete and more varied?" (which, by the way, gives us the formula of *progress*).

The desire to help evolution in this direction determines the social, scientific, and artistic activity of the Anarchist. And this activity, in its turn, precisely on account of its falling in with the development of society in this direction, becomes a source of increased vitality, vigour, sense of oneness with mankind and its best vital forces.

It therefore becomes a source of increased vitality and happiness for the individual.

IX.

THE ANARCHIST IDEAL AND THE PRECEDING REVOLUTIONS.

Anarchism, as we have already said, arises from the course taken by practical life.

Godwin, contemporary of the Great Revolution of 1789-93, had seen with his own eyes how the authority of the Government, created during the Revolution and by the Revolution itself, had in its turn become an obstacle to the development of the revolutionary movement. He was also aware of what went on in England under cover of Parliament: the pillage of communal lands, the sale of advantageous posts, the hunting of the children of the poor and their removal from workhouses, by agents who travelled all over England for the purpose, to the factories of Lancashire, where masses of them soon perished. And Godwin soon understood that a Government, were it even that of the Jacobin "One and Indivisible Republic," would never be able to accomplish the necessary Social, Communistic Revolution; that a Revolutionary Government, by virtue of its being a guardian of the State, and of the privileges every State has to defend, soon becomes a hindrance to the Revolution. He understood and openly proclaimed the idea that for the triumph of the Revolution men must first get rid of their faith in Law, Authority, Unity, Order, Property, and other institutions inherited from past times when their forefathers were slaves.

The second Anarchist theorist, Proudhon, who came after Godwin, lived through the Revolution of 1848. He was able to see with his own eyes the crimes committed by the Republican Government, and at the same time convince himself of the impotence of Louis Blanc's State Socialism. Under the recent impression of what he had seen during the Revolution of 1848, he wrote his powerful work, "General Idea on the Revolution," in which he boldly proclaimed Anarchism and the abolition of the State.

And lastly, in the International Working Men's Association the Anarchist conception also asserted itself after a Revolution—

that is, after the Paris Commune of 1871. The complete revolutionary impotence of the Council of the Commune, although it contained, in a very just proportion, representatives of all the revolutionary parties of that time: Jacobins, Blanquists, and Internationalists; and the incapacity of the General Council of the International Working Men's Association, which was sitting in London, and its silly, harmful pretensions to govern the Parisian movement by orders issued from England; both these lessons opened the eyes of a great number. They led several Federations of the International, and several of its prominent members, including Bakunin, to meditate on the harmfulness of every kind of authority, even when it is elected with as much freedom as that of the Commune or that of the Workers' International.

Some months later, the decision taken by the General Council of the International at a private meeting convened in London in 1871, instead of an annual Congress, made the dangers of a Government in the International still more evident. By this baneful resolution the forces of the Association, which up till then gathered together for an economic, revolutionary struggle, for the direct action of the Labour Unions against the Capitalism of employers, were to engage in an electoral, political, and Parliamentary movement, which could but waste and destroy their real forces.

This resolution brought about open rebellion among the Latin Federations of the Association—Spanish, Italian, Jurassic, and partly Belgian—against the General Council; and from this rebellion dates the Anarchist movement which we see going on.

We thus see that the Anarchist movement was renewed each time it received an impression from some great practical lesson: it derived its origin from the teachings of life itself. But no sooner had it sprung up than it began to work out a general expression of its principles, and the theoretical and scientific basis of its teachings. Scientific—not in the sense of adopting an incomprehensible slang, or clinging to ancient metaphysics, but in the sense of finding a basis for its principles in the natural sciences of the time, and of becoming one of their departments.

At the same time it worked out its own ideal.

No struggle can be successful if it is unconscious, if it has no definite and concrete aim. No destruction of existing things is possible if men have not already settled for themselves, during the struggles leading to the destruction, and during the period

of destruction itself, what is going to take the place of that which is to be destroyed. Even a theoretical criticism of what exists is not possible without one picturing to oneself a more or less exact image of that which he desires to see in its place. Consciously or unconsciously, the *ideal*, the conception of something better, always grows in the mind of whoever criticises existing institutions.

It is the more so with men of action. To tell men: "Let us first destroy Capitalism and Autocracy, and then we shall see what we shall put in their stead," is but to deceive oneself and to deceive others. *Never has a real force been created by deception.* In fact, even the one who deprecates ideals and sneers at them always has, nevertheless, some conception of what he would like to see in lieu of what he is attacking. For example, while working to destroy Autocracy, some imagine an English or a German Constitution in the near future; others dream of a Republic, subject perhaps to a powerful dictatorship of their party, or a Monarchical Republic as in France, or a Federative Republic as in the United States; while there is now a third party which conceives a still greater limitation of State power, a still greater liberty for the cities, for the Communes, for the workers' Unions, and for all sorts of groups united among themselves by free, temporary federation, than can be obtained in any Republic.

And when people attack Capitalism, they always have a certain conception, a vague or definite idea, of what they hope to see in the place of Capitalism: State Capitalism, or some sort of State Communism, or a federation of free Communist associations for the production, the exchange, and the consumption of commodities.

Each party has thus its own conception of the future—its ideal which enables it to pronounce its own judgment on all facts occurring in the political and economic life of nations, and inspires it in its search for suitable means of action, in order the better to march towards its aim. It is, therefore, natural that Anarchism, although it has originated in every-day struggles, has also worked to elaborate its ideal. And this ideal, this aim, these plans, soon separated the Anarchists, in their means of action, from all political parties, as also, in a very great measure, from the Socialist parties which have thought it possible to keep the ancient Roman and Canonical idea of the State and to transport it into the future society of their dreams.

X.

ANARCHISM.

It is seen from the foregoing that a variety of considerations, historical, ethnological, and economical, have brought the Anarchists to conceive a society, very different from what is considered as its ideal by the authoritarian political parties. The Anarchists conceive a society in which all the mutual relations of its members are regulated, not by laws, not by authorities, whether self-imposed or elected, but by mutual agreements between the members of that society, and by a sum of social customs and habits—not petrified by law, routine, or superstition, but continually developing and continually readjusted, in accordance with the ever-growing requirements of a free life, stimulated by the progress of science, invention, and the steady growth of higher ideals.

No ruling authorities, then. No government of man by man; no crystallisation and immobility, but a continual evolution—such as we see in Nature. Free play for the individual, for the full development of his individual gifts—*for his individualisation*. In other words, no actions are *imposed* upon the individual by a fear of punishment; none is required from him by society, but those which receive his free acceptance. *In a society of equals* this would be quite sufficient for preventing those unsociable actions that might be harmful to other individuals and to society itself, and for favouring the steady moral growth of that society.

This is the conception developed and advocated by the Anarchists.

Of course, up till now no society has existed which would have realised these principles in full, although the striving towards a partial realisation of such principles has always been at work in mankind. We may say, therefore, that Anarchism is a certain *ideal* of society, and that this ideal is different from the ideal of society which has hitherto been advocated by most philosophers, scientists, and leaders of political parties, who pretended to rule mankind and to govern men.

But it would not be fair to describe such a conception as *a Utopia*, because the word "Utopia" in our current language conveys the idea of something that *cannot* be realised.

Taken in its usual current sense, therefore, the word "Utopia" ought to be limited to those conceptions only which are based on merely theoretical reasonings as to what is *desirable* from the writer's point of view, but not on what *is already developing* in human agglomerations. Such were, for instance, the Utopias of the Catholic Empire of the Popes, the Napoleonic Empire, the Messianism of Mickiewicz, and so on. But it cannot be applied to a conception of society which is based, as Anarchism is, on an analysis of *tendencies of an evolution that is already going on in society*, and on *inductions* therefrom as to the future—those tendencies which have been, as we saw, for thousands of years the mainspring for the growth of sociable habits and customs, known in science under the name of Customary Law, and which affirm themselves more and more definitely in modern society.

With regard to what is very often said as to the necessary slowness of every new step that is made by evolution, let us remember that not further than at the end of the eighteenth century—at the very time when the United States had started in life—a society of a somewhat larger size without a monarch was considered a foolish Utopia. But the North and the South American Republics, the Swiss Republic and France have proved since, as we know, that the "Utopians" were not the Republicans but the admirers of monarchy. It was the latter, who, guided by their desires only, did not take into account the *tendencies* of societies developing far from the yoke of monarchist traditions; the latter, and not the Republicans, who attributed too much importance and stability to the monarchist institutions—without noticing that they were not an outcome of human nature, but an outcome of temporary historical conditions.

When we look into the origin of the Anarchist conception of society, we see that it has had a double origin: the criticism, on the one side, of the hierarchical organisations and the authoritarian conceptions of society; and on the other side, the analysis of the tendencies that are seen in the progressive movements of mankind, both in the past, and still more so at the present time.

From the remotest, Stone-age antiquity, men must have realised the evils that resulted from letting some of them acquire personal authority—even if they were the most intelligent, the bravest, or the wisest. Consequently, they developed, in the

primitive clan, the village community, the mediaeval guild (neighbours' guilds, arts and crafts' guilds, traders', hunters', and so on), and finally in the free mediaeval city, such institutions as enabled them to resist the encroachments upon their life and fortunes both of those strangers who conquered them, and those clansmen of their own who endeavoured to establish their personal authority. The same popular tendency was self-evident in the religious movements of the masses in Europe during the earlier portions of the Reform movement and its Hussite and Anabaptist forerunners. At a much later period, namely, in 1793, the same current of thought and of action found its expression in the strikingly independent, freely federated activity of the "Sections" of Paris and all great cities and many small "Communes" during the French Revolution.* And later still, the Labour combinations which developed in England and France, notwithstanding Draconic laws, as soon as the factory system began to grow up, were an outcome of the same popular resistance to the growing power of the few—the capitalists in this case.

These were the main popular Anarchist currents which we know of in history, and it is self-evident that these movements could not but find their expression in literature. So they did, beginning with Lao-tse in China, and some of the earliest Greek philosophers (Aristippus and the Cynics; Zeno and some of the Stoics). However, being born in the masses, and not in any centres of learning, these popular movements, both when they were revolutionary and when they were deeply constructive, found little sympathy among the learned men—far less than the authoritarian hierarchical tendencies.

The Greek Stoic, Zeno, already advocated a free community, without any government, which he opposed to the State Utopia of Plato. He already brought into evidence the instinct of sociability, which Nature had developed in opposition to the egotism of the self-preservation instinct. He foresaw a time when men would unite across the frontiers and constitute the Cosmos, and would have no need of laws, law-courts, or temples—and no need either of money for their exchanges of mutual services. His very wording seems to have been strikingly similar to that now in use amongst Anarchists.†

The Bishop of Alba, Marco Girolamo Vida, developed, in

* See "The Great French Revolution" (London: Heinemann, 1909).

† See article, "Anarchism," in the forthcoming (eleventh) edition of the "Encyclopaedia Britannica."

1553, similar ideas against the State, its laws, and its "supreme injustice"; as also did the early precursors of Rationalism in Armenia (in the ninth century), the Hussites (especially Chojecki, in the fifteenth century), and the early Anabaptists.

Rabelais in the first half of the sixteenth century, Fénélon at the end of it, and especially the Encyclopaedist Diderot at the end of the eighteenth century, developed the same ideas, which found, as has just been mentioned, some practical expression during the French Revolution.

But it was Godwin, in his "Enquiry Concerning Political Justice," who stated in 1793 in a quite definite form the political and economic principles of Anarchism. He did not use the word "Anarchy" itself, but he very forcibly laid down its principles, boldly attacking the laws, proving the uselessness of the State, and maintaining that only with the abolition of Courts true *Justice*—the only real foundation of all society—would become possible. As regards property, he openly advocated Communism.*

Proudhon was the first to use the word "An-archy" (No-Government) and to submit to a powerful criticism the fruitless efforts of men to give themselves such a Government as would prevent the rich ones from dominating the poor, and at the same time always remain under the control of the governed ones. The repeated attempts of France, since 1793, at giving herself such a Constitution, and the failure of the Revolution of 1848, gave him rich material for his criticism.

Being an enemy of all forms of State Socialism, of which the Communists of those years (the "forties" and "fifties" of the nineteenth century) represented a mere sub-division, Proudhon fiercely attacked all such attempts; and taking Robert Owen's system of labour cheques representing hours of labour, he developed a conception of *Mutualism*, in which any sort of political Government would be useless.

The values of all the commodities being measured by the amount of labour necessary to produce them, all the exchanges between the producers could be carried on by means of a national bank, which would accept payment in labour cheques—a Clearing House establishing the daily balance of exchanges between the thousands of branches of this bank.

The services exchanged by different men would thus be

* It is all in the first edition of 1793, made in two quarto volumes. In the second edition, published in two octavo volumes in 1796, after the prosecution of his Republican friends, he withdrew his views on Communism, and mitigated his views on government.

equivalent; and as the bank would be able to lend the labour cheques' money without interest, and every association would be able to borrow it on payment of only 1 per cent. or less to cover the administration costs, capital would lose its pernicious power; it could be used no more as an instrument of exploitation.

Proudhon gave to the system of Mutualism a very full development in connection with his anti-Government and anti-State ideas; but it must be said that the Mutualist portion of his programme had been developed in England already by William Thompson (he was a Mutualist prior to his becoming a Communist) and the English followers of Thompson—John Gray (1825, 1831) and J. F. Bray (1839).

In the United States, the same direction was represented by Josiah Warren, who, after having taken part in Robert Owen's colony, "New Harmony," turned against Communism, and in 1827 founded, in Cincinnatti, a "store" in which goods were exchanged on the principle of time-value and labour cheques. Such institutions remained in existence up till 1865 under the names of "Equity Stores," "Equity Village," and "House of Equity."

The same ideas of labour-value and exchange at labour-cost were advocated in Germany, in 1843 and 1845, by Moses Hess and Karl Grün; and in Switzerland by Wilhelm Marr, who opposed the authoritarian Communist teachings of Weitling.

On the other side, in opposition to the strongly authoritarian Communism of Weitling, which had found a great number of adherents among working men in Germany, there appeared in 1845 the work of a German Hegelian, Max Stirner (Johann Kaspar Schmidt was his real name), "The Ego and His Own," which was lately rediscovered, so to say, by J. H. Mackay, and very much spoken of in Anarchist circles as a sort of manifesto of the Individualist Anarchists.*

Stirner's work is a revolt against both the State and the new tyranny which would have been imposed upon man if authoritarian Communism were introduced. Reasoning on Hegelian metaphysical lines, Stirner preaches therefore the rehabilitation of the "I" and the supremacy of the individual; and he comes in this way to advocate complete "a-moralism" (no morality) and an "association of egoists."

* A French translation of it was published at Paris in 1900, and an English translation, under the above title, was published by B. R. Tucker at New York in 1907.

It is easy to see, however—as has been indicated more than once by Anarchist writers, and lately by the French professor, V. Basch, in an interesting work, "Anarchist Individualism: Max Stirner" (1904, in French)—that this sort of Individualism, aiming as it does at the "full development," not of all members of society, but of those only who would be considered as the most gifted ones, without caring for the right of full development for *all*—is merely a disguised return towards the now-existing education-monopoly of the few. It simply means a "right to their full development" for the privileged minorities. But, as such monopolies cannot be maintained otherwise than under the protection of a monopolist legislation and an organised coercion by the State, the claims of these Individualists necessarily end in a return to the State idea and to that same coercion which they so fiercely attack themselves. Their position is thus the same as that of Spencer, and of all the so-called "Manchester school" of economists, who also begin by a severe criticism of the State and end in its full recognition in order to maintain the property monopolies, of which the State is the necessary stronghold.

Such was the growth of Anarchist ideas, from the French Revolution and Godwin to Proudhon. The next step was made within the great "International Working Men's Association," which so much inspired the working classes with hope, and the middle classes with terror, in the years 1868-1870—just before the Franco-German War.

That this Association was not founded by Marx, or any other personality, as the hero-worshippers would like us to believe, is self-evident. It was the outcome of the meeting, at London, in 1862, of a delegation of French working men, who had come to visit the Second International Exhibition, with representatives of British Trade Unions and Radicals, who received that delegation.

Already in 1830 Robert Owen had made an attempt at organising, beside his "Great National Trades' Union," an "International Union of All Trades"; but the idea had soon to be abandoned, in consequence of the wild prosecutions that the British Government directed against the National Trades' Union. However, the idea was not lost. It smouldered in England; it found followers in France; and after the defeat of the Revolution of 1848, it was taken by some French refugees across the Atlantic, and propagated in the United States, in a paper, *L'Internationale.*

Now, the French working men who came to London in 1862 being mostly Proudhonian "Mutualists," and the British Trade Unionists being mainly followers of Robert Owen, British "Owenism" thus joined hands with French "Mutualism," with the result of giving birth to a powerful international Labour organisation. In Marx and several others this union of the two leading Socialist currents of the time found the intellectual support of the secret political organisation of the "Materialist Communists" *(Communistes Matérialistes)*, an organisation which represented what was still living of the secret societies, once so powerful in the "thirties" and "forties" under Blanqui and Barbès, these societies themselves having originated in the conspiracy of the authoritarian Communists, organised by Babeuf in 1794–1795.

We saw in a previous chapter that the years 1856–1862 were years of a wonderful revival in science and philosophy. They were also years of a general political revival of Radicalism in Europe and America. And this was stirring everywhere the working men, who began to see that they themselves must prepare the proletarian revolution. The International Exhibition of 1862 was described as a great Fête of the World's Industry, which would mark a new departure in the struggle of Labour for its emancipation; and now the creation of an International Working Men's Association, which boldly announced its rupture with the old political parties, and the firm resolution of the working men to take the work of their liberation into their own hands, made a very deep impression.

The Association began to spread rapidly in the Latin countries. Its fighting power soon became menacing, while at the same time its Federations and its yearly Congresses offered to the working men the opportunity of discussing and bringing into shape the ideas of a Social Revolution.

The near approach of such a Revolution was generally expected at that time, but no definite ideas as to its possible form and its immediate steps were forthcoming. On the contrary, several conflicting currents of Socialist thought met together in the International.

The main idea of the Association was a direct struggle of Labour against Capital in the economic field—*i.e.*, the emancipation of Labour, not by middle-class legislation, but by the working men themselves.

But *how* the liberation of Labour from the capitalist yoke would be accomplished, *what form* the new organisation of production and exchange would take—in this respect the opinions of the Socialists were divided quite as much in 1864–1868 as they were twenty years before, when the representatives of the different Socialist schools met together in the Republican Constituent Assembly sitting at Paris in 1848.

Like their French predecessors, whose aspirations were so admirably summed up in 1848 by Considérant, in his "Socialism Before the Old World," the Socialists of the International Working Men's Association did not rally under the banner of one single doctrine. They oscillated between several different solutions.

There was, first, the direct legacy of the Great French Revolution—the Babeuf conspiracy of 1795—that is, the secret societies of the French "Materialist Communists" and the German Communists, followers of Weitling. Both lived upon the traditions of the stern Jacobinism of 1793. In 1848 they still dreamed of some day seizing the political power in the State—perhaps with the preliminary aid of a dictator—and of instituting, on the model of the terrorism of the Jacobinist societies of 1793 (but this time in favour of the workers), a "dictatorship of the proletariat." This dictatorship would introduce Communism by means of stern legislation.

Property-owning would be rendered so unbearable by means of a thousand laws, restrictions, taxation, and so on, that the property-owners would be happy to surrender their properties to the State. Then, "armies of labourers" would be sent out to cultivate the fields, and industrial production for the State would be organised in the same semi-military fashion.* This school continued to cherish the same ideals at the time of the foundation of the International Association, and had later on a great following in France among the Blanquists.

Diametrically opposed to this Jacobinist Communism was the Co-operative idea of Robert Owen, which refused to resort to the coercive action of the State, and relied chiefly, both for realising the Revolution and maintaining the new Socialistic life, on the power of the organised and federated Labour Unions. The British Owenites repudiated Communism; but, in common with

* It is interesting to note that similar ideas about State agriculture, carried on by "armies of labourers," had been expressed by Napoleon III., while he was yet a pretender to the Presidency of the Republic, in a pamphlet, "The Extinction of the Proletariate."

the French followers of Fourier, they attached a great importance to the freely constituted and federated communities or groups, which would own in common their land, their factories, and their stores; while remuneration for work, both within each industrial village, and in the exchange between the different groups, would be made by means of labour-cheques, representing the hours of labour that were spent by each person in the communal fields, workshops, or factories.

The same idea of remuneration by labour-cheques was advocated, as we have already seen, by Proudhon and his Mutualist followers. They also repudiated the coercive intervention of the State, both during the transitory period and the subsequent Socialist life. They considered that what now constitutes the functions of the State in economic matters could be accomplished by the branches of the Bank of the People and the Clearing Houses; while education, sanitary arrangements, and so on ought to be in the hands of entirely independent Communes.

Again, the same idea of labour-cheques taking the place of money in all exchanges, but with a *State ownership of all the land, the mines, the railways, and the factories*, was advocated by two remarkable writers, Pecqueur and Vidal, who described their system as *Collectivism*. Pecqueur, who was a member of the Constituent Assembly in 1848, wrote a whole treatise on this matter, in which he developed his system in full—even in the shape of laws which the Assembly had only to vote to accomplish the Social Revolution. The names of Vidal and Pecqueur were quite forgotten by that time, but their ideas were widely spread, and they were soon revived among the Germans under the names of "Marxism," "scientific Socialism," or "Collectivism."

By the side of these different schools, the ideas of the Saint-Simonist school had a considerable hold upon many minds in the International Working Men's Association, as they also had had among the revolutionists of 1848.

A great number of brilliant writers, politicians, and industrialists, among whom suffice it to name the philosopher Auguste Comte, the historian Augustin Thierry, and the economist Sismondi, had developed under the inspiration of the teachings of Saint-Simon. And their work had deeply influenced most social reformers.

Human progress—they said—had hitherto consisted in transforming Slavery into Serfdom, and Serfdom into the Wage System. But the time had now come to abolish the Wage

System in its turn. And with it, individual property had also to go. Private ownership and Authority were not immutable institutions. Property had already undergone several modifications in the course of history, and new changes, having become necessary, would have to be made.

The abolition of private property—they wrote—could be done gradually, by a series of measures (of which the Great Revolution had already begun to take the initiative), enabling the State to appropriate, in the shape of inheritance duties, a steadily growing proportion of the estates transmitted by inheritance. Individual inheritance being thus more and more reduced, so as to be eventually abolished, and the rich people themselves seeing their own advantage in abandoning privileges which belong to a dying stage of civilisation, "the State would finally become the sole owner of all the lands and industrial concerns, as also the supreme regulator of all labour, the head and the absolute regulator of the three main functions of social life—Art, Science, and Industry." *

Every one, being a worker in one of these branches, would thus be a *functionary* of the State. As to the Government, it would be composed of a hierarchy of the "best men"—the best men of science, the best artists, the best industrialists.

The distribution of the commodities produced would be made, under this system, in virtue of the principle: *To each one according to his capacity, to each capacity according to its works.*†

The Saint-Simonist school, and still more so the Positivist philosophy to which it gave birth, produced a number of quite remarkable historical works, in which the origins of authority, of property, and of the State divided into classes were discussed in a really scientific way, and which up till now have retained their value. The Saint-Simonists severely criticised at the same time the so-called classical political economy of Adam Smith and Ricardo (which was known later on as the Manchester school of "non-intervention of the State"). But while combatting the principle of commercial and industrial individualism and competition, advocated by these economists, the Saint-Simonists fell into the error which they themselves had combatted at the outset, when they severely criticised the military State and the

* V. Considérant, "Le Socialisme devant le Vieux Monde," 1848, p. 36. I use here the very words of Considérant, to show how Saint-Simonism was understood by the Socialists in 1848, and how many of its ideas are still retained in the teachings of the Social Democrats.

† I translate verbally the Saint-Simonist formula.

State based upon a division of society into classes ("the Class-State"). They ended by recognising an all-powerful State. They based the structure of society upon inequality and authority, and they based order upon a hierarchy of administrators, proceeding from above to below.

From the Communists of 1848 the Saint-Simonists thus differed by allotting to the individual a purely *individual* share in the riches produced by the whole community. Notwithstanding the valuable work which some of them had accomplished in political economy, they did not yet reach the conception of all production being a *social* fact, and consequently of it being materially impossible to determine with justice the share which must be attributed to each separate individual out of the total mass of commodities produced.

Upon this point the Communists widely differed from the Saint-Simonists. But there was one point upon which both the authoritarian Communists and the followers of Saint-Simon agreed. They both ignored the individual and his claims. All that the Communists did, was to concede to the individual the right of electing his administrators and rulers, which the earlier Saint-Simonists, before 1848, refused to admit. But under Communism, as under Saint-Simonism and under Collectivism, the individual was a mere functionary of the State. With Cabet, Jacobinist Communism, the suppression of individuality, reached its fullest expression.

And finally we must mention the followers of Louis Blanc, very numerous at that time both in France and Germany (where they were represented by a strong body of Lassalleans). They considered that the transfer of industrial property from Capital to Labour could be effected if a Government, born of a revolution and inspired by Socialist ideas, would aid the workers in organising a wide system of productive Labour Associations, support them by loans, and join all of them in one large system of national production. Equal remuneration of all workers in these associations might be accepted as a transitory form—their final aim being to come later on to a division of produce according to the needs of each producer. It was thus, as Considérant remarked, Communistic Saint-Simonism under State management.

Supported by a large system of State credit, granted at a very low rate of interest, freely competing against capitalist production, and upheld by the commands of the State, such Labour Associations would soon oust the Capitalist from the

industrial field, take his place everywhere, and gradually spread also on to the land, in agriculture. This economic, Socialist aim must be kept in view by the worker—not the merely political ideals of the bourgeois politicans.

With various modifications in the details, and with more or less vagueness or precision, these ideas, which had been spread by the Revolution of 1848, were widely diffused in the International Association. They also, as we see, recognised as their basis a strong, powerful Government, holding in its hands the economic life of the nation; and they recognised in full the present hierarchic and centralised organisation of the State.

Happily enough, there circulated also in the International the ideas of the Fourierists, which counter-balanced to some extent the ideas of these Jacobinist admirers of the State.

XI.

ANARCHISM—*(Continued).*

Fourier—a contemporary of the Great French Revolution, from which he derived his chief ideas—was no longer living when the International was founded. But his views had been popularised so well by his followers—especially by Considérant, who had given them a scientific unity—that, consciously or not, the most enlightened spirits of the Working Men's Association were very much under the influence of the ideas of Fourier.*

Now, the leading idea of Fourier was not so much the union between Capital, Labour, and Talent for the production of commodities, to which such a prominent place is usually given in most historical works on Socialism. His chief aim was to get rid of individual commerce for private profit, with all the speculations it necessarily provokes, and to call into existence a *free national organisation of exchange of all the commodities.*

To use Considérant's words, the remedy against all infamies of present exploitation Fourier saw in "*bringing into direct relations* the producer and the consumer, by organising intermediary COMMUNAL AGENCIES, which would be the depositaries —not the owners—of all food produce, and would deliver this produce directly to the consumers, adding only to its price the real cost of transport, storage, and administration, which always is almost insignificant."

This is how Considérant understood Fourier ("Le Socialisme devant le Vieux Monde," p. 38); and one sees that Fourier, who at the age of seven took his Hannibal oath against Commerce, and who had lived through the Great French Revolution and seen the speculations begun during the Revolution by the sale of

* It is known, from our friend Tcherkesoff's work, that it was from Considérant's "Principles of Socialism: Manifesto of the XIXth Century Democracy," published in 1843, that Marx and Engels borrowed the theoretical part of the economic principles which they expressed in the "Communist Manifesto." The borrowing, indeed, even of the form itself, is quite evident to any one who will consult both manifestoes. As to the practical programme of that Manifesto, it was, as Professor Audler has shown, that of the Communist, French and German secret organisations, originating from the *débris* of the secret societies of Babeuf and Buonarroti.

national estates, and the speculations in food during the war fully understood the dominating importance of that great attempt which was made by the *sansculottes*, in 1793 and 1794, to *nationalise trade*, by means of communal depôts.

The COMMUNE, the free municipality—Fourier called it a *Phalanx*—had thus, in Fourier's opinion, to offer the solution of the great problem of Exchange and Distribution of Produce. But this Commune would not be the *owner* of the stored produce: it would only be a *depositary*—an agency for storing the produce and distributing it, which realises *no profit* and levies no tribute upon the consumers.

Fourier gave a further extension to his idea. He supposed that all the families of a rural Commune constitute a *Phalanx;* they put together their land, their chattels, and their agricultural implements, and cultivate their land, or engage in industrial pursuits, as if the land, the chattels, the machines, etc., were their common property—a careful record, however, being kept of every inhabitant's contribution to the working capital.

Two main points had to be kept in view in such an association. There must be *no disagreeable labour*. All labour must be so organised, so distributed, and so diversified as always to be *attractive*. And *no sort of coercion must be exercised*. In a society organised on the principle of free association, no sort of coercion could be tolerated, and none would be needed. With some intelligent attention to the needs of every member of the Phalanx, and with its combination of agricultural, industrial, intellectual, and artistic work, the members of the Phalanx would soon recognise that even the passions of men, which under the present structure of society often become a nuisance and a danger, and are always an excuse for coercion—even the passions can be a source of progress, if their exercise be recognised, and a reasonable social outlet for them be given in the shape of new ventures, risky enterprises, social animation, diversity, and so on.

As to how the commodities produced would be distributed, Fourier—who, after the defeat of the Great French Revolution, and during the awful reaction that followed it, was naturally induced to advocate peaceful solutions only—insisted upon the necessity of recognising the principle of *association* between Capital, Labour, and Talent. Accordingly, the value of the commodities produced by each Phalanx ought to be divided, in his opinion, into three parts, one of which would remunerate Capital, another would remunerate Labour, and the third would

be the share of Talent. However, most of the Internationalists saw in this part of Fourier's ideas a mere concession to the reaction that reigned during his lifetime; at any rate, they treated them as a point which did not affect the more essential portions of his scheme, which were the following:—

1. The Commune—*i.e.*, a *small* territorial unit—is to be considered as the basis of the new Socialist society.

2. It is the depositary of all the commodities produced in the surrounding locality, and the intermediary for exchange. It represents also the association of consumers, and very probably in most cases it will also be the *producing* unit (which may, however, also be a professional, and not a territorial group, or a federation of producing groups).

3. These Communes freely federate, in order to constitute the Federation, the Region, or the Nation.

4. Labour *must* be rendered *attractive*. No solution whatever of the Social question is possible, so long as this has not been achieved. And to attain this is quite possible.

5. To maintain harmony in such communities, no coercion is necessary. The influence of public opinion alone will do.

As to how distribution would take place in each Commune, the working men of the International considered that this must be settled by the Commune itself, which may introduce the Communist principle, "to each one according to his needs," or adopt some system of remuneration by results. This solution, which left to each Commune the choice of the system of remuneration, was the essence of what was known among the Latin nations as "Collectivism"—in opposition to the authoritarian Communism of the Babeuf schools.

And finally, as to how the present society could pass over to a Socialist one, it was almost unanimously recognised by the workers that the time is soon coming when a new revolution, much deeper and more universal than that of 1848, would break out; and then the workers would do all in their power to dispossess Capital of its present monopolies.

This, then, was the ground upon which the Anarchist ideas were going to develop within the International.

One sees from the above sketch how the Jacobinist ideas —centralist and authoritarian—intermingled in the International with ideas of local independence and federation. Both were legacies of the Great French Revolution. If the centralist ideas were handed down directly from the Jacobinists of 1793 and the conspiracy of Babeuf, through the secret Communist organisations

of the first half of the nineteenth century, the ideas of local independent action were handed down, at least among the French, from the powerful and truly revolutionary and constructive action of the "Sections" of Paris and the Communes of 1793–94, which I have described lately in "The Great French Revolution."

It must be said, however, that the former, *i.e.*, the Jacobinist current, undoubtedly was the more powerful of the two. The educated middle-class people who had joined the International were mostly Jacobinist.

And now came the terrible Franco-German War, into which Napoleon III. and his advisers madly rushed, in order to save the Empire from the rapidly advancing revolution; and with it came the crushing defeat of France, the Provisory Government of Gambetta and Thiers, and the Commune of Paris, followed by similar attempts at Saint Etienne in France, and at Barcelona and Carthagena in Spain. And these popular insurrections brought into evidence what the *political* aspect of a Social Revolution ought to be.

Not a Democratic Republic, as was said in 1848, but *the free, independent Communist Commune.*

Of course, the Paris Commune itself suffered from the confusion of ideas as to the economic and political steps to be taken by the Revolution, which prevailed, as we saw, in the International. Both the Jacobinists and the Communalists—*i.e.*, the centralists and the federalists—were represented in the uprising, and necessarily they came into conflict with each other. The most warlike elements were the Jacobinists and the Blanquists, but the economic, Communist ideals of Babeuf had already faded among their middle-class leaders. They treated the economic question as a secondary one, which would be attended to later on, *after* the triumph of the Commune, and this idea prevailed. But the crushing defeat which soon followed, and the bloodthirsty revenge taken by the middle class, proved once more that the triumph of a popular Commune was materially impossible without a parallel triumph of the people in the economic field.

For the Latin nations, the Commune of Paris, followed by similar attempts at Carthagena and Barcelona, settled the ideas of the revolutionary proletariat.

This was the form that the Social Revolution must take—the independent Commune. Let all the country and all the world be against it; but once its inhabitants have decided that they *will*

communalise the consumption of commodities, their exchange, and their production, *they must realise it among themselves.* And in so doing, they will find such forces as never could be called into life and to the service of a great cause, if they attempted to take in the sway of the Revolution the whole country, including its most backward or indifferent regions. Better openly to fight such strongholds of reaction than to drag them as so many chains rivetted to the feet of the fighter.

More than that. We made one step more. We understood that if no central Government was needed to rule the independent Communes, if the national Government is thrown overboard and national unity is obtained by free federation, then a central *municipal* Government becomes equally useless and noxious. The same federative principle would do within the Commune.

The uprising of the Paris Commune thus brought with it the solution of a question which tormented every true Revolutionist. Twice had France tried to bring about some sort of a Socialist revolution, by imposing it through a Central Government, more or less disposed to accept it: in 1793-94, when she tried to introduce *l'égalité de fait*—real, economic equality—by means of strong Jacobinist measures; and in 1848, when she tried to impose a "Democratic Socialist Republic." And each time she failed. But now a new solution was indicated: the free Commune must do it on its own territory, and with this grew up a new ideal—ANARCHY.

We understood then that at the bottom of Proudhon's "Idée Générale sur la Révolution au Dix-neuvième Siècle" (unfortunately, not yet translated into English) lay a deeply *practical* idea—that of Anarchy. And in the Latin countries the thought of the more advanced men began to work in this direction.

Alas! in Latin countries only: in France, in Spain, in Italy, in the French-speaking part of Switzerland, and the Wallonic part of Belgium. The Germans, on the contrary, drew from their victory over France quite another lesson and quite different ideals—the worship of the centralised State.

The centralised State, hostile even to national tendencies of independence; the power of centralisation and a strong central authority—these were the lessons they drew from the victories of the German Empire, and to these lessons they cling even now, without understanding that this was only a victory of a military mass, of the universal obligatory military service of the Germans

over the recruiting system of the French and over the rottenness of the second Napoleonic Empire approaching a revolution which would have benefitted mankind, if it were not hindered by the German invasion.

In the Latin countries, then, the lesson of the Paris and the Carthagena Communes laid the foundation for the development of Anarchy. And the authoritarian tendencies of the General Council of the International Working Men's Association, which soon became evident and worked fatally against the unity of action of the great Association, still more reinforced the Anarchist current of thought. The more so as that Council, led by Marx, Engels, and some French Blanquist refugees—all pure Jacobinists—used its powers to make a *coup d'état* in the International. It substituted in the programme of the Association Parliamentary political action *in lieu* of the economic struggle of Labour against Capital, which hitherto had been the essence of the International. And in this way it provoked an open revolt against its authority in the Spanish, Italian, Jurassic, and East Belgian Federations, and among a certain section of the English Internationalists.

In Mikhail Bakunin, the Anarchist tendency, now growing within the International, found a powerful, gifted, and inspired exponent; while round Bakunin and his Jura friends gathered a small circle of talented young Italians and Spaniards, who further developed his ideas. Largely drawing upon his wide knowledge of history and philosophy, Bakunin established in a series of powerful pamphlets and letters the leading principles of modern Anarchism.

The complete abolition of the State, with all its organisation and ideals, was the watchword he boldly proclaimed. The State has been in the past a historical necessity, which grew out of the authority won by the religious castes. But its complete extinction is now, in its turn, a historical necessity, because the State represents the negation of liberty, and spoils even what it undertakes to do for the sake of general well-being. All legislation made within the State, even when it issues from the so-called universal suffrage, has to be repudiated, because it always has been made with regard to the interests of the privileged classes. Every nation, every region, every commune must be absolutely free to organise itself, politically and economically, as it likes, so long as it is not a menace to its neighbours. "Federalism" and "autonomy" are not enough. These are only

words, used to mask the State authority. Full independence of the Communes, their free federation, and the Social Revolution within the Communes—this was, he proved, the ideal now rising before our civilisation from the mists of the past. The individual understands that he will be really free in proportion only as all the others round him become free.

As to his economic conceptions, Bakunin was at heart a Communist; but, in common with his Federalist comrades of the International, and as a concession to the antagonism to Communism that the authoritarian Communists had inspired in France, he described himself as a "Collectivist Anarchist." But, of course, he was not a "Collectivist" in the sense of Vidal or Pecqueur, or of their modern followers, who simply aim at "State Capitalism"; he understood it in the above-mentioned sense of *not* determining in advance what form of distribution the producers should adopt in their different groups—whether the Communist solution, or the labour cheques, or equal salaries, or any other method. And with these views, he was an ardent preacher of the Social Revolution, the near approach of which was foreseen then by all Socialists, and which he foretold in fiery words.*

* A number of Bakunin's co-workers and friends—namely, Varlin, Guillaume, and the Italians—had already in 1869 described themselves as Communist Anarchists; but, forced to fight bitterly later on for the independence of their respective Federations, they gave only a secondary attention to this question, leaving it to be decided in the future by the Communes and Labour organisations themselves.

XII.

ANARCHISM—*(Continued).*

If the revolt against the State, so long as it was advocated, before 1848 and later on till the Paris Commune, by middle-class writers, took the character of a revolt of the *individual* against society and its hypocrisy,—now, when a similar revolt began to take place among the working men, it took a deeper character. It became a research of those forms of *society* which might get rid of the oppression and exploitation of men by other men which is now going on with the aid of the State. In the International Working Men's Association its founders saw the embryo of that society which would be called into existence by a social revolution—a society where the functions now belonging to Government would be substituted by free agreements growing out of the direct relations between free groups of producers and consumers. In these surroundings the ideal of the Anarchist ceased to be *individual:* it became *social.*

In proportion as the workers of Europe and America began to know each other directly, without the intermediary of Governments, they grew more and more convinced of their own forces and of their capacity for rebuilding society on new bases. They saw that if the people resumed possession of the land and of all that is required for producing all sorts of necessaries of life, and if the associations of men and women who would work on the land, in the factories, in the mines, and so on, became themselves the managers of production, they would be able, in such conditions, to produce with the greatest ease all that is necessary for the life of society, so as to guarantee well-being for all, and also some leisure for all. The recent progress in science and technics rendered this point more and more evident. Besides, in a vast international organisation of producers and consumers, the exchange of produce could be organised with the same ease—once it would not be done for the enrichment of the few.

At the same time, the ever-growing thinking portion of the workers saw that the State, with its traditions, its hierarchy, and its narrow nationalism, would always stand in the way of the development of such an organisation; and the experiments made in different countries with the view of partially alleviating the

social evils within the present middle-class State proved more and more the fallacy of such tactics.

The wider the sphere of those experiments, the more evident it was that the machinery of the State could not be utilised as an instrument of emancipation. The State is an institution which was developed for the very purpose of establishing monopolies in favour of the slave and serf owners, the landed proprietors, canonic and laic, the merchant guilds and the moneylenders, the kings, the military commanders, the "noble-men," and finally, in the nineteenth century, the industrial capitalists, whom the State supplied with "hands" driven away from the land. Consequently the State would be, to say the least, a useless institution, once these monopolies ceased to exist. *Life would be simplified*, once the mechanism created for the exploitation of the poor by the rich would have been done away with.

The idea of independent Communes for the territorial organisation, and of federations of Trade Unions for the organisation of men in accordance with their different functions, gave a *concrete* conception of society regenerated by a social revolution. There remained only to add to these two modes of organisation a third, which we saw rapidly developing during the last fifty years, since a little liberty was conquered in this direction: the thousands upon thousands of free combines and societies growing up everywhere for the satisfaction of all possible and imaginable needs, economic, sanitary, and educational; for mutual protection, for the propaganda of ideas, for art, for amusement, and so on. All of them covering each other, and all of them always ready to meet the new needs by new organisations and adjustments.

More than that. It begins to be understood now that if human societies go on developing on these lines, coercion and punishment must necessarily fall into decay. The greatest obstacle to the maintenance of a certain moral level in our present societies lies in the absence of social equality. Without *real* equality, the sense of justice can never be universally developed, because *Justice implies the recognition of Equality;* while in a society in which the principles of justice would not be contradicted at every step by the existing inequalities of rights and possibilities of development, they would be bound to spread and to enter into the habits of the people.

In such a case the individual would be *free*, in the sense that his freedom would not be limited any more by *fear:* by the fear of a social or a mystical punishment, or by obedience, either to other men reputed to be his superiors, or to mystical and

metaphysical entities—which leads in both cases to intellectual servility (one of the greatest curses of mankind) and to the lowering of the moral level of men.

In free surroundings based upon Equality, man might with full confidence let himself be guided by his own reason (which, of course, by necessity, would bear the stamp of his social surroundings). And he might also attain the full development of his individuality; while the "individualism" considered now by middle-class intellectuals as the *means* for the development of the better-gifted individuals, is, as every one may himself see, the chief *obstacle* to this development. Not only because, with a low productivity, which is kept at a low level by Capitalism and the State, the immense majority of gifted men have neither the leisure nor the chance to develop their higher gifts; but also because those who have that leisure are recognised and rewarded by the present society on the condition of never going "too far" in their criticisms of that society, and especially—never going over to acts that may lead to its destruction, or even to a serious reform. Those only are allowed to attain a certain "development of their individualities" who are not dangerous in this respect—those who are merely "interesting," but not dangerous to the Philistine.

The Anarchists, we have said, build their previsions of the future upon those data which are supplied by the observation of life at the present time.

Thus, when we examine into the tendencies that have prevailed in the life of civilised countries since the end of the eighteenth century, we certainly do not fail to see how strong the centralising and authoritarian tendency was during that time, both among the middle classes and those working men who have been educated in the ideas of the middle classes and now strive to enter the ranks of their present rulers and exploiters.

But at the same time it is a fact that the anti-centralist and anti-militarist ideas, as well as the ideas of a free understanding, grow stronger and stronger nowadays both among the working men and the better educated and more or less intellectually free portions of the middle classes—especially in Western Europe.

I have shown, indeed, elsewhere (in "Conquest of Bread" and in "Mutual Aid") how strong at the present time is the tendency to constitute freely, *outside the State and the Churches*, thousands upon thousands of free organisations for all sorts of needs: economic (agreements between the railway companies, the

Labour Syndicates, trusts of employers, agricultural co-operation, co-operation for export, etc.), political, intellectual, artistic, educational, and so on. What formerly belonged without a shadow of doubt to the functions of the State, or the Church, enters now into the domain of free organisation.

This tendency develops with a striking rapidity under our very eyes. It was sufficient that a breath of emancipation should have slightly limited the powers of Church and State in their never-satisfied tendency towards further extension—and voluntary organisations have already germinated by the thousand. And we may be sure that every new limitation that may be imposed upon State and Church—the two inveterate enemies of freedom—will still further widen the sphere of action of the free organisations.

Future progress lies in this direction, and Anarchism works precisely that way.

Passing now to the economic views of Anarchists, three different conceptions must be distinguished.

So long as Socialism was understood in its wide, generic, and true sense—as an effort to *abolish* the exploitation of Labour by Capital—the Anarchists were marching hand-in-hand with the Socialists of that time. But they were compelled to separate from them when the Socialists began to say that there is no possibility of *abolishing* capitalist exploitation within the lifetime of our generation: that *during that phase of economic evolution which we are now living through* we have only *to mitigate* the exploitation, and to impose upon the capitalists certain legal limitations.

Contrarily to this tendency of the present-day Socialists, we maintain that already now, without waiting for the coming of new phases and forms of the capitalist exploitation of Labour, we must work for its *abolition*. We must, already now, tend to transfer all that is needed for production—the soil, the mines, the factories, the means of communication, and *the means of existence, too*—from the hands of the individual capitalist into those of the communities of producers and consumers.

As for the *political* organisation—*i.e.*, the forms of the commonwealth in the midst of which an economic revolution could be accomplished—we entirely differ from all the sections of State Socialists in that we do not see in the system of *State Capitalism*, which is now preached under the name of Collectivism, a solution of the social question. We see in the organisation of

the posts and telegraphs, in the State railways, and the like—which are represented as illustrations of a society without capitalists—nothing but a new, perhaps improved, but still undesirable form of the Wage System. We even think that such a solution of the social problem would so much run against the present libertarian tendencies of civilised mankind, that it simply would be unrealisable.

We maintain that the State organisation, having been the force to which the minorities resorted for establishing and organising their power over the masses, cannot be the force which will serve to destroy these privileges. The lessons of history tell us that a new form of economic life always calls forth a new form of political organisation; and a Socialist society (whether Communist or Collectivist) cannot be an exception to this rule. Just as the Churches cannot be utilised for freeing man from his old superstitions, and just as the feeling of human solidarity will have to find other channels for its expression besides the Churches, so also the economic and political liberation of man will have to create new forms for its expression in life, instead of those established by the State.

Consequently, the chief aim of Anarchism is to awaken those constructive powers of the labouring masses of the people which at all great moments of history came forward to accomplish the necessary changes, and which, aided by the now accumulated knowledge, will accomplish the change that is called forth by all the best men of our own time.

This is also why the Anarchists refuse to accept the functions of legislators or servants of the State. We know that the social revolution will not be accomplished by means of *laws*. Laws can only *follow* the accomplished facts; and even if they honestly do follow them—which usually is *not* the case—a law remains a dead letter so long as there are not on the spot the living forces required for making of the *tendencies* expressed in the law an accomplished *fact*.

On the other hand, since the times of the International Working Men's Association, the Anarchists have always advised taking an active part in those workers' organisations which carry on the *direct* struggle of Labour against Capital and its protector, —the State.

Such a struggle, they say, better than any other indirect means, permits the worker to obtain some temporary improvements in the present conditions of work, while it opens his eyes to the evil that is done by Capitalism and the State that supports

it, and wakes up his thoughts concerning the possibility of organising consumption, production, and exchange without the intervention of the capitalist and the State.

The opinions of the Anarchists concerning the form which *the remuneration of labour* may take in a society freed from the yoke of Capital and State still remain divided.

To begin with, all are agreed in repudiating the new form of the Wage System which would be established if the State became the owner of all the land, the mines, the factories, the railways, and so on, and the great organiser and manager of agriculture and all the industries. If these powers were added to those which the State already possesses (taxes, defence of the territory, subsidised religions, etc.), we should create a new tyranny, even more terrible than the old one.

The greater number of Anarchists accept the Communist solution. They see that the only form of Communism that would be acceptable in a civilised society is one which would exist without the continual interference of Government, *i.e.*, the Anarchist form. And they realise also that an Anarchist society of a large size would be impossible, unless it would begin by guaranteeing to all its members a certain minimum of well-being produced in common. Communism and Anarchy thus complete each other.

However, by the side of this main current there are those who see in Anarchism a rehabilitation of Individualism.

This last current is, in our opinion, a survival from those times when the power of production of food-stuffs and of all industrial commodities had not yet reached the perfection they have attained now. In those times Communism was truly considered as equivalent to general poverty and misery, and well-being was looked at as something which is accessible to a very small number only. But this quite real and extremely important obstacle to Communism exists no more. Owing to the immense productivity of human labour which has been reached nowadays in all directions—agricultural and industrial—it is quite certain, on the contrary, that a very high degree of well-being can easily be obtained in a few years by Communist work.

Be this as it may, the Individualist Anarchists sub-divide into two branches. There are, first, the pure Individualists, in the sense of Max Stirner, who have lately gained some support in the beautiful poetical form of the writings of Nietzsche. But we have already said once how metaphysical and remote from real life is this "self-assertion of the individual"; how it runs

against the feelings of equality of most of us; and how it brings the would-be "Individualists" dangerously near to those who imagine themselves to represent a "superior breed"—those to whom we owe the State, the Church, modern legislation, the police, militarism, Imperialism, and all other forms of oppression.

The other branch of Individualist Anarchists comprises the *Mutualists*, in the sense of Proudhon, of whom we spoke in a previous chapter, and whose ideas, we have seen, have had a certain success in the United States, so that there are still organisations of farmers who exchange their produce on the principle of the hour-for-an-hour cheques. However, there will always be against this system the objection that it could hardly be compatible with a system of common ownership of land and the necessaries for production. Communism in the possession of land, factories, etc., and Individualism in production are too contradictory to co-exist in the same society—to say nothing of the difficulty of estimating the *market* value, or the *selling* value, of a product by the average time that is necessary, or the time that was actually used, in producing it. To bring men to agree upon such an estimation of their work would already require a deep penetration of the Communist principle into their ideas—at least, for all produce of first necessity. And if a community introduced, as a further concession to Individualism, a higher payment for skilled work, or chances of promotion in a hierarchy of functionaries, this would reintroduce all those inconveniences of the present Wage System which are combatted now by the workers.

To some extent the same remark applies to the American Anarchist Individualists who were represented in the "fifties" by S. P. Andrews and W. Greene, later on by Lysander Spooner, and now are represented by Benjamin Tucker, the well-known editor of the New York *Liberty*. Their ideas are partly those of Proudhon, but partly also those of Herbert Spencer. They start from the principle that the only law which is obligatory for the Anarchist is to mind his own business, and not to meddle with that of others; that each individual and each group have the *right* to oppress all mankind—if they have the *force* to do so; and that if this only law, of minding one's own business, had received a *general* and *complete* application, it would offer no danger, because the rights of each individual would have been limited by the equal rights of all others.

But, to reason in this way is to pay, in our opinion, too large a tribute to metaphysical dialectics, and to ignore the

facts of real life. It is impossible to conceive a society in which the affairs of any one of its members would not concern many other members, if not all; still less a society in which a continual contact between its members would not have established an interest of every one towards all others, which would render it *impossible* to act without thinking of the effects which our actions may have on others.

This is why Tucker, like Spencer, after his admirable criticism of the State and a vigorous defence of the rights of the individual, comes to recognise the right of *defence* of its members by the State. But it was precisely by assuming the function of "defence" of its weaker members that the State, in its historical evolution, developed all its *aggressive* functions, which Spencer and Tucker have so brilliantly criticised.

This contradiction is probably the reason why Anarchist Individualism, while it finds followers amongst the middle-class intellectuals, does not spread amongst the workers. It must, however, be said that it renders a real service in preventing the Anarchist Communists from making too many concessions to the old idea of State officialism. Old ideas are so difficult to get rid of.

As to Anarchist Communism, it is certain that this solution wins more and more ground nowaday among those working men who try to get a clear conception as to the forthcoming revolutionary action. The Syndicalist and Trade Union movements, which permit the working men to realise their solidarity and to feel the community of their interests, much better than any elections, prepare the way for these conceptions. And it is hardly too much to hope that when some serious movement for the emancipation of Labour begins in Europe and America, attempts will be made, at least in the Latin countries, in the Anarchist Communist direction—much deeper than anything that was done by the French nation in 1793-94.

XIII.

A FEW CONCLUSIONS OF ANARCHISM.

Such being the leading ideas of Anarchism, let us take now a few concrete illustrations, to show the place that our ideas occupy in the scientific and social movement of our own times.

When we are told that we must respect Law (written with a capital letter), because "Law is Truth expressed in an objective form," or because "the leading steps in the evolution of Law are the same as those of the evolution of Mind," or again, because "Law and Morality are identical, and only differ from each other in form"—we listen to such high-flown assertions with as little reverence as Mephistopheles did in Goethe's "Faust." We know, of course, that those who wrote them spent much effort of mind before they thus worded their thoughts, imagining them to be extremely deep; but we know also that these were nothing but unconscious attempts at broad generalisations, founded, however, on an altogether insufficient basis, and obscured by words so chosen as to hypnotise men by their high-style obscurity.

In fact, in ancient times men endeavoured to give a divine origin to Law; later on, they strove to give it a metaphysical basis; but to-day we are able to study the origin of the conceptions of Law, and their anthropological development, just as we are able to study the evolution of weaving or of the ways of honey-making by the bees. Having now at our disposal the work of the anthropological school, we study the appearance of social customs and conceptions of Law amongst the most primitive savages, and we follow their gradual development through the codes of different historical periods, down to our own times.

In so doing, we come to the conclusion, already mentioned on one of the preceding pages:—All laws have *a double origin*, and it is precisely this double origin which distinguishes them from customs established by usage and representing the principles of morality existing in a particular society at a particular epoch. Law confirms these customs: it crystallises them; but at the same time it takes advantage of these generally approved customs, in order to introduce in disguise, under their sanction, some new institution which is entirely to the advantage of the

military and governing minorities. For instance, Law introduces, or gives sanction to, Slavery, Caste, paternal, priestly, and military authority; or else it smuggles in serfdom, and, later on, subjection to the State. By this means, Law has always succeeded in imposing a yoke on man without his perceiving it, a yoke which he has never been able to throw off save by means of revolutions.

Things came to pass in this way from the earliest time till our own; and we see the same going on now, even in the advanced legislation of our own days—in the so-called Labour legislation; because, side by side with the "protection of the worker," which represents their acknowledged aim, these laws surreptitiously insert the idea of *compulsory* arbitration by the State in case of a strike (compulsory arbitration—what a contradiction!); or they interpolate the principle of a compulsory working day of so many hours. They open the door to the military working of railways in case of a strike; they give legal sanction to the oppression of peasants in Ireland, by imposing high prices for the redemption of the land; and so on. And such a system will flourish as long as *part* of society will make laws for the *whole* of society; and by this means they further extend the power of the State, which constitutes the principal prop of Capitalism.

As long as laws are made and enforced, the result necessarily will be the same.

We understand therefore why Anarchism, since Godwin, has disowned all written laws, although the Anarchists, more than any legislators, aspire to Justice, which—let us repeat it—is equivalent to *Equality*, and impossible without it.

When the objection is raised against us that in repudiating *Law* we repudiate *Morality*, as we do not recognise the "categorical imperative" about which Kant spoke to us, we answer that the language of this objection is in itself strange and incomprehensible to our mind.* It is just as strange and incomprehensible as it would be to a naturalist who studied Morality. Before entering into the discussion, we therefore ask our interlocutors this question: "What do you mean by this 'categorical imperative'? Cannot you translate your assertion into comprehensible language, as, for example, Laplace used to do, when he found the means of expressing the formulas of

* I am mentioning here an objection which I borrow from a recent correspondence with a German doctor.

higher mathematics in words that every one understood? All great scientists do that; why do not you do as much?"

In fact, what is meant when the words "universal law" or "categorical imperative" are used? Is it that all men accept the idea: "Do not do to others what you do not want them to do to you"? If so, very well. Let us begin to study (as Hutchinson and Adam Smith have done before us) whence came this moral conception, and how did it develop? Let us then study in what degree this idea of Justice implies Equality. A very important question, because only those who consider *others* as their *equals* can obey the rule: "Do not do to *others* what you do not wish them to do to you." A serf-owner and a slave merchant can evidently not recognise the "universal law" or the "categorical imperative" as regards serfs and negroes, because they do not look upon them as equals. And if our remark be correct, let us see whether it is possible to inculcate morality while inculcating ideas of inequality.

Let us analyse next, as Guyau did, the "sacrifice of self," and, having done that, let us see what were the causes and the conditions that have most contributed in history to the development of moral sentiment—both of that sentiment which is expressed in the commandment concerning our neighbour, and of that other feeling which leads to self-sacrifice. Then we shall be able to deduce which social conditions and institutions promise the best results in the future. We shall learn how much religion contributed to it, and how far the economic and political inequalities established by Law hamper it: what is the part contributed towards the development of these feelings by Law, punishments, prisons, judges, gaolers, and executioners.

Let us study all this in detail, separately, and then we shall be able to talk, with some practical result, of social morality and of moralisation by Law, by Tribunals, and by Superintendents of Police. But high-flown words, that only serve to hide from us the superficiality of our would-be knowledge, had better be left alone. They may have been unavoidable at a certain period of history, though even then their having been useful is very doubtful; but now, fit as we are to undertake the study of the most arduous social questions in exactly the same way as the gardener on the one hand, and the physiologist on the other hand, study the most favourable conditions for the growth of a plant—let us do so!

Again, when an economist comes and says to us: "In an

absolutely open market the value of goods is measured by the quantity of work socially necessary to produce those goods" (see Ricardo, Proudhon, Marx, and so many others), we do *not* accept this assertion as an article of faith for the reason that it was put forth by a particular authority, or that it may seem to us "devilishly Socialistic." "It is possible," we say, "that it is true. But do you not see that, in making this assertion, you maintain that the value and quantity of work necessary are *proportional*, just as the rapidity of a falling body is proportional to the number of seconds that the fall lasts? You thus affirm a certain *quantitative relation* between labour and market value. Very well; but have you, then, made mensurations, observations —*quantitative measures* that alone could confirm a *quantitative* assertion?

You can say that, *broadly speaking*, the exchange value of goods grows if the quantity of necessary work is greater. *This is how Adam Smith expressed himself;* but then he was wise enough to add that under capitalist production the proportionality between exchange value and the amount of necessary labour exists no more. But to jump to the conclusion that *consequently* the two quantities are *proportional*, that one is the measure of the other, and that this is a law of Economics, is a gross error. As gross as to affirm, for example, that the quantity of rain that is going to fall to-morrow will be proportional to the quantity of millimetres that the barometer will have fallen below the average established at a certain place in a certain season.

The man who first remarked that there was a correlation between the lower level of the barometer and the quantity of rain that falls—the man who first remarked that a stone falling from a great height has acquired a greater velocity than a stone that has only fallen one yard, made scientific discoveries. That is what Adam Smith did as regards Value. But the man who would come after such a general remark has been made, and affirm that the quantity of rain fallen *is measured* by the quantity the barometer has fallen below the average, or else, that the space traversed by a falling stone is *proportional* to the duration of the fall and is measured by it, would be talking nonsense. Besides, he would prove that *scientific methods* of research are absolutely strange to him. He would prove that his writings are *not scientific*, however full of words borrowed from scientific jargon. But this was exactly what was done by those who made the above-mentioned affirmation about Value.

It must be noticed that if the absence of exact numerical data be alleged as an excuse for the superficial dealing with economic matters of which we spoke previously—this is no excuse at all.

In the domain of exact sciences we know very many cases where two quantities depend upon each other, so that if one of them increases, the other increases as well—and yet we know that they are *not* proportional to each other. The rapidity of growth of a plant certainly depends, among other causes, upon the quantity of heat it obtains. Both the height of the sun above the horizon and the average temperature of every separate day (deduced from many years' observations) increase every day after March 22. The recoil of a gun increases when we increase the quantity of powder in the cartridge. And so on.

But where is the man of science who, after having noticed these relations, would conclude that *consequently* the rapidity of growth of the plant and the quantity of heat it receives, the height of the sun above the horizon and the average daily temperature, the recoil of the gun and the quantity of powder in the cartridge are *proportional?* that, if one of the two increases twice, or thrice, the other will increase at the same ratio? in other words, that *the one is the measure of the other?* A man of science knows that thousands of other relations, besides that of proportionality, may exist between the two quantities; and unless he has made *a number of measurements* which prove that *such* a relation of simple proportionality exists, nobody will ever dare to make such an affirmation.

Yet this is what economists do, when they say that labour *is* the measure of value! Worse than that, they even do not see that they only make a mere *suggestion*, a *guess*. They boldly affirm that their affirmation is a LAW; they even do not understand the need of verifying it by measurements.

In reality, the relations between such quantities as the growth of a plant and the heat it receives, the quantity of powder burned and the recoil of a gun, etc., are too complicated to be expressed by a mere arithmetical proportion. And this is also the case with the relation between Labour and Value. Value in exchange and the necessary Labour are *not proportional to each other;* Labour is *not the measure* of Value, and Adam Smith had already noticed it. After having begun by stating it *was*, he soon noticed that this was true only in the tribal stage of mankind. Under the capitalist system, value in exchange is measured *no more* by the amount of necessary labour. Many

other factors come in in a capitalist society, so as to alter the simple relation that may have existed once between labour and exchange value. But modern economists take no heed of that: they go on repeating what Ricardo wrote in the first half of the nineteenth century.

The same remark which we make concerning Value applies to most of the assertions that are made by the economists and the so-called "scientific Socialists," who continually represent their guesses as "natural laws." Not only do we maintain that most of these would-be "laws" are not correct, but we are certain that those who believe in such "laws" would themselves recognise their mistake as soon as they would realise, as naturalists do, the necessity of submitting every numerical, quantitative statement to a numerical, quantitative test.

All Political Economy takes, in an Anarchist's view, an aspect quite different from the aspect given to it by the economists, who, being unaccustomed to use the scientific, inductive method, even do not realise what a "natural law" is, although they very much like to use this expression. They even do not notice the *conditional* character of all so-called natural "laws."

In fact, every natural law always means this:—"*If* such and such conditions are at work, the result will be this and that.—*If* a straight line crosses another line, so as to make equal angles on both its sides at the crossing point, the consequences will be such and such.—*If* those movements only which go on in the interstellar space act upon two bodies, and there is not, at a distance which is not infinitely great, a third, or a fourth body acting upon the two, then the centres of gravity of these two bodies will begin to move towards each other at such a speed" (this is the law of gravitation). And so on.

Always, there is an *if*—a condition to be fulfilled.

Consequently, all the so-called *laws* and theories of political economy are nothing but assertions of the following kind:—

"Supposing that there always are in a given country a considerable number of people who cannot exist one month, or even one fortnight, without earning a salary and accepting for that purpose the conditions which the State will impose upon them (in the shape of taxes, land-rent, and so on), or those which will be offered to them by those whom the State recognises as owners of the soil, the factories, the railways, etc.—such and such consequences will follow."

Up till now, the academic economists have always simply

enumerated what happens under such conditions, without specifying and analysing the conditions themselves. Even if they were mentioned, they were forgotten immediately, to be spoken of no more.

This is bad enough, but there is in their teachings something worse than that. The economists represent *the facts which result from these conditions as laws—as fatal, immutable laws.* And they call that Science.

As to the Socialist political economists, they criticise, it is true, some of the conclusions of the academical economists, or they explain differently certain facts; but all the time they also forget the just-mentioned conditions and give to the economic *facts* of a given epoch too much stability, by representing them as natural *laws.* None of them has yet traced his own way in economic science. The most that was done (by Marx in his "Capital") was to take the metaphysical definitions of the academical economists, like Ricardo, and to say: "You see, even if we take your own definitions, we can prove that the capitalist exploits the worker!" Which sounds very nice in a pamphlet, but is very far from being Economic Science.

Altogether, we think that to become a science, Political Economy has to be built up in a different way. It must be treated as a natural science, and use the methods used in all exact, empirical sciences; and it must trace for itself a different aim. It must take, with regard to human societies, a position analogous to that which is occupied by Physiology with regard to plants and animals. It must be a Physiology of Society.

Its aim must be the study of the ever-growing sum of *needs* of society, and the *means* used—both formerly and nowaday—for satisfying them. It must see how far these means were, and are now, suitable for the aims that are kept in view. And then—the purpose of each science being prediction and application to the demands of practical life (Bacon said so long since)—Political Economy must study the means of best satisfying the present and future needs with *the least expenditure of energy* (with *economy*), and with the best results for mankind altogether.

It is thus evident why our conclusions are so different in many respects from those arrived at by the economists, both academic and Social Democratic; why we do not consider as "laws" certain "correlations" indicated by them; why our exposition of Socialism is so different from theirs; and why we

draw from the study of the tendencies of modern economic life conclusions so different from their conclusions as regards what is desirable and possible; in other words, why we come to Free Communism, while they come to State Capitalism and the Collectivist Wage System.

It is possible that we are wrong, and they are right. But the question as to which of us is right, and which wrong, cannot be settled by means of Byzantine commentaries as to what such or such a writer intended to say, or by talking about what agrees with the "trilogy" of Hegel; most certainly not by continuing to use the dialectic method.

It can be done *only by studying the facts of Economics in the same way and by the same methods as we study natural sciences.**

By using still the same method, the Anarchist comes to his

* The following few abstracts from the letter of a well-known biologist, a Belgian professor, which I received while I was reading the proofs of the French edition of this work, will better explain what is meant by the above lines; the passages in straight brackets [. . .] are added by me:—

"In proportion as I advance in the reading of 'Fields, Factories, and Workshops,' I become more and more convinced that henceforward the study of economic and social questions will only be accessible to those who have studied natural sciences and *are imbued with the spirit of these sciences.* Those who have received the so-called classical education only are incapable of understanding the present movement of ideas, and are equally incapable of studying quite a number of special questions.

".....The idea of integration of labour, and of *the division of labour in time* [that is, the idea that it would be advantageous for society if every one could work alternately in agriculture, industry, and intellectual pursuits, in order to vary his work and to develop his individuality in all directions], is sure to become one of the corner-stones of economic science. There is a mass of biological facts which are in accordance with the above underlined idea, which show that this is a law of Nature [in other words, that in Nature an economy of energy is often obtained by this means]. If we examine the vital functions of a living being during the different stages of its existence, or even during different seasons, and in some cases during different hours of the day, we find an application of that division of labour in time, which is intimately connected with division of labour between the organs (Adam Smith's law).

"Men of science unacquainted with natural sciences are incapable of understanding the real scope of a LAW in Nature; they are blinded by the mere word *law,* and they imagine that a law, like that of Adam Smith, has a fatal force from which it is impossible to escape. When they are shown the other side of this law—*i.e.*, its deplorable results from the point of view of individual development and happiness—they reply: '*This law is inexorable,*' and very often this reply is given with a sharp intonation which shows a feeling of infallibility. But the naturalist knows very well that science knows how to annul the bad effects of a

own conclusions as regards the different political forms of society, and especially the State. We are not impressed in the least by assertions such as the following: "The State is the affirmation of the idea of supreme Justice in Society," or "The State is the Instrument and the Bearer of Progress," or "Without State—no Society."

True to our method, we study the State with the same disposition of mind as if we studied a society of ants or bees, or of birds which have come to nest on the shores of an Arctic lake or sea. To repeat here the conclusions we have come to in consequence of such studies, would be needless. We would have to repeat what has been said by Anarchists from the times of Godwin till the present day, and which can be found with all necessary developments in a number of books and pamphlets.

Suffice it for our purpose to say that for *our* European civilisation (the civilisation of the last fifteen hundred years, to which civilisation we belong) the State is a form of society that was developed only since the sixteenth century, and this under the influence of a series of causes which one will find mentioned, for instance, in my essay, "The State: its Historic Rôle." Before that, and since the fall of the Roman Empire, the State—in its Roman form—did not exist. If we find it, nevertheless, in historical school-books, even at the outset of the barbarian period, it is a product of the imagination of historians who will draw the genealogical trees of kings—in France, up to the heads of the Merovingian bands, and in Russia, up to Rurik in 862. *Real* historians know that the State was reconstituted only upon the ruins of the mediæval free cities.

On the other side, the State, considered as a political power, State-Justice, the Church, and Capitalism are facts and conceptions which we cannot separate from each other. In the course of history these institutions have developed, supporting and reinforcing each other.

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natural *law:* that very often the man who tries to go against Nature achieves his aim.

"Gravity makes physical bodies fall, but the same gravity makes a balloon *rise* [aviation with machines heavier than air is another recent example in point]. For *us* it is so simple; but the economists of the classical school seem to have the greatest trouble in understanding the scope of such an observation.

"The law of *division of labour in time* will be some day the counterpart of the law of Adam Smith, and it will permit us to obtain the integration of work in the individual."

They are connected with each other—not as mere accidental coincidences. They are linked together by the links of cause and effect.

The State is, for us, a society of mutual insurance between the landlord, the military commander, the judge, the priest, and later on the capitalist, in order to support each other's authority over the people, and for exploiting the poverty of the masses and getting rich themselves.

Such was the origin of the State; such was its history; and such is its present essence.

Consequently, to imagine that Capitalism may be abolished while the State is maintained, and with the aid of the State—while the latter was founded for forwarding the development of Capitalism and was always growing in power and solidity, in proportion as the power of Capitalism grew up—to cherish such an illusion is as unreasonable, in our opinion, as it was to expect the emancipation of Labour from the Church, or from Cæsarism or Imperialism. Certainly, in the first half of the nineteenth century, there have been many Socialists who had such dreams; but to live in the same dreamland now that we enter in the twentieth century, is really too childish.

A new form of economic organisation will necessarily require a new form of political structure. And, whether the change be accomplished suddenly, by a revolution, or slowly, by the way of a gradual evolution, the two changes, political and economic, must go on abreast, hand in hand.

Each step towards economic freedom, each victory won over Capitalism will be at the same time a step towards political liberty—towards liberation from the yoke of the State by means of free agreement, territorial, professional, and functional. And each step made towards taking from the State any one of its powers and attributes will be helping the masses to win a victory over Capitalism.

XIV.

THE MEANS OF ACTION.

It is self-evident that if the Anarchists differ so much in their methods of investigation and in their fundamental principles, both from the academic men of science and from their Social Democratic colleagues, they must equally differ from them in their means of action.

Holding the opinions we do about Law and the State, we evidently cannot see a source of Progress, and still less an approach to the required social changes, in an ever-growing submission of the individual to the State.

We cannot either go on saying, as superficial critics of present society often say when they require the State management of industries, that modern Capitalism has its origin in an "anarchy of production" due to the "non-intervention of the State" and to the Liberal doctrine of "let things alone" (*laissez faire, laissez passer*). This would amount to saying that the State *has* practised this doctrine, while in reality it never has practised it. We know, on the contrary, that while all Governments have given the capitalists and monopolists full liberty to enrich themselves with the underpaid labour of working men reduced to misery, they have NEVER, NOWHERE given the working men the liberty of opposing that exploitation. Never has any Government applied the "leave things alone" principle to the exploited masses. It reserved it for the exploiters only.

In France, even under the terrible "revolutionary" (*i.e.*, Jacobinist) Convention, strikes were treated as a "coalition"—as "a conspiracy to form a State within the State"—and punished with death. So we need not speak after that of the anti-Labour legislation of the Napoleonic Empire, the monarchic Restoration, or even the present middle-class Republic.

In England, working men were hanged for striking, under the pretext of "intimidation," as late as in 1813; and in 1834 working men were transported to Australia for having dared to found, with Robert Owen, a "National Trades' Union." In the "sixties" strikers were sent to hard labour for picketing, under the pretext of thus defending "freedom of labour"; and not

further back than 1903, as a result of the Taff Vale decision, the Amalgamated Society of Railway Servants had to pay £26,000 to a railway company for having declared a strike.

Need we speak after that of France, where the right of constituting Labour Unions and peasant Syndicates was obtained only in 1884, after the Anarchist agitation which broke out at Lyons and among the miners in 1883; or of Switzerland, where strikers were shot at Airolo during the boring of the St. Gothard tunnel; to say nothing of Germany, Spain, Russia, and the United States, where State intervention in favour of capitalist misrule was still worse?

On the other side, we have only to remember how every State reduces the peasants and the industrial workers to a life of misery, by means of taxes, and through the monopolies it creates in favour of the landlords, the cotton lords, the railway magnates, the publicans, and the like. We have only to think how the communal possession of the land was destroyed in this country by Enclosure Acts, or how at this very moment it is destroyed in Russia, in order to supply "hands" to the landlords and the great factories.

And we need only to look round, to see how everywhere in Europe and America the States are constituting monopolies in favour of capitalists at home, and still more in conquered lands, such as Egypt, Tonkin, the Transvaal, and so on.

What, then, is the use of talking, with Marx, about the "primitive accumulation"—as if this "push" given to capitalists were a thing of the past? In reality, new monopolies have been granted every year till now by the Parliaments of all nations to railway, tramway, gas, water, and maritime transport companies, schools, institutions, and so on. The State's "push" is, and has ever been, the first foundation of all great capitalist fortunes.

In short, nowhere has the system of "non-intervention of the State" ever existed. Everywhere the State has been, and still is, the main pillar and the creator, direct and indirect, of Capitalism and its powers over the masses. Nowhere, since States have grown up, have the masses had the freedom of resisting the oppression by capitalists. The few rights they have now they have gained only by determination and endless sacrifice.

To speak therefore of "non-intervention of the State" may be all right for middle-class economists, who try to persuade the

workers that their misery is "a law of Nature." But—l
Socialists use such language? The State has *always* in
in the economic life in favour of the capitalist exploi
has always granted him protection in robbery, given a
support for further enrichment. *And it could not be oth*
To do so was one of the functions—the chief mission—
State.

The State was established for the precise purpose of in
the rule of the landowners, the employers of industry, the
class, and the clergy upon the peasants on the land a
artisans in the city. And the rich perfectly well know
the machinery of the State ceased to protect them, their
over the labouring classes would be gone immediately.

Socialism, we have said—whatever form it may take
evolution towards Communism—must find *its own fo*
political organisation. Serfdom and Absolute Monarchy
always marched hand-in-hand. The one rendered the o
necessity. The same is true of Capitalist rule, whose po
form is Representative Government, either in a Republic
Monarchy. This is why Socialism *cannot* utilise Represen
Government as a weapon for liberating Labour, just as it c
utilise the Church and its theory of divine right, or Imper
and Caesarism, with its theory of hierarchy of functionari
the same purpose.

A new form of political organisation has to be worked ou
moment that Socialist principles shall enter into our life.
it is self-evident that this new form will have to be *more pop*
more decentralised, and nearer to the folk-mote self-govern
than representative government can ever be.

This is also the tendency which begins to prevail in
conception of men, the moment they free themselves from
prejudice of authority. If we carefully observe life in
country, in France, and in the States, we see, indeed, a de
tendency towards constituting independent communes, muni
and rural, associations, societies, federations, etc., assuming
social and economic functions, and connected with each othe
free agreement, independent of State intervention. Of cour
is not the German Emperor, or the English Imperialists, or
the Swiss Jacobin Radicals who pursue such aims. These pe
have their eyes turned backwards. But there is a progres
fraction of society, chiefly among the working men, both
Europe and America, who work hard to create such new chan

of common life and work, independent of and quite outside the State.

Knowing all this, we obviously cannot see an element of Progress in an ever-increasing submission to the State. On the contrary, we represent ourselves a forward movement of society as an approach to *the abolition of all the authority of Government*, as a *development of free agreement* for all that formerly was a function of Church and State, and as a *development of free initiative* in every individual and every group. And these are the tendencies which determine the tactics of the Anarchists in the life of both the individual and our circles.

Finally, being a revolutionary party, what we study in history is chiefly the genesis and the gradual development of previous revolutions. In these studies we try to free history from the State interpretation which has been given to it by State historians. We try to reconstitute in it the true rôle of the people, the advantages it obtained from a revolution, the ideas it launched into circulation, and the faults of tactics it committed.

Studying the beginnings of a revolution, we are not yet satisfied when we have read how miserable were the masses before the revolution. We want to know: how did they pass from their condition of inactivity and despair to their revolutionary activity? how did they wake up? what did they do after the awakening?

We understand, for instance, the Great French Revolution quite differently from a Louis Blanc, who saw in it a political movement directed by the Jacobinist Club. We see in it a great *popular* movement, which took place especially in the villages, among the peasants, for the abolition of feudal servitude and the return to the villages of the lands seized since 1669 in virtue of Enclosure Acts; and in the towns—for getting rid of the misery of the town proletariate by means of a national organisation of exchange and socialisation of production. (See my "Great French Revolution.")

We study the movement towards Communism which began to develop amongst the poorest part of the population in 1793-94, and the admirable forms of voluntary popular organisation for a variety of functions, economic and political, that they worked out in the "Sections" of the great cities and some of the small municipalities. On the other side, we carefully study the growth of the power of the middle classes, who worked with energy and knowledge at constituting their own authority, in lieu of the

broken authority of the King and his *camarilla*. We see how they laboured to build up a powerful centralised State, and thus to consolidate the property they acquired during or through the Revolution, as well as their full right to enrich themselves with the underpaid work of the poorer classes. We study the development and the struggle of these two powers, and try to find out why the latter gained the upper hand over the former.

And then we see how the centralised State, created by the Jacobinist middle classes, prepared the way for the autocratic Empire of Napoleon I. We see how, half a century later, Napoleon III. found in the dreams of those who meant to create a centralised Republic the necessary elements for his Second Empire. And we understand how this centralised authority, which for seventy years in succession killed in France every local effort and every personal effort made outside the State hierarchy, remains till now the curse of the country. The first effort to be free from it was only made in 1871 by the Paris Communalist proletarians.

It is thus seen how in this domain, too, our comprehension of history and the conclusions we draw therefrom are quite different from the comprehension and the historical conclusions of both the middle-class and the Socialist political parties.

Without entering here into an analysis of the different revolutionary movements, it is sufficient to say that our conception of the coming social revolution is quite different from that of a Jacobin dictatorship, or the transformation of social institutions effected by a Convention, a Parliament, or a dictator. Never has a revolution been brought about on those lines; and if the present working-class movement takes this form, it will be doomed to have no lasting result.

On the contrary, we believe that if a revolution begins, it must take the form of a widely spread popular movement, during which movement, in every town and village invaded by the insurrectionary spirit, the masses set themselves to the work of reconstructing society on new lines. The people—both the peasants and the town workers—must themselves begin the constructive work, on more or less Communist principles, without waiting for schemes and orders from above. From the very beginning of the movement they must contrive to house and to feed every one, and then set to work to produce what is necessary to feed, house, and clothe all of them.

They may not be—they are sure not to be—the *majority* of

the nation. But if they are a respectably numerous minority of cities and villages scattered over the country, starting life on their own new Socialist lines, they will be able to win the right to pursue their own course. In all probability they will draw towards them a notable portion of the land, as was the case in France in 1793–94.

As to the Government, whether it be constituted by force only or by election; be it "the dictatorship of the proletariate," as they used to say in France in the "forties," and as they still say in Germany, or else an elected "Provisional Government," or a "Convention"; we put no faith in it. We know beforehand that it will be able to do nothing to accomplish the revolution, so long as the people themselves do not accomplish the change by working out on the spot the necessary new institutions.

We say so, not because we have a personal dislike of Governments, but because the whole of history shows us that men thrown into a Government by a revolutionary wave have never been able to accomplish what was expected from them. And this is *unavoidable*. Because in the task of reconstructing society on new principles, separate men, however intelligent and devoted they may be, are sure to fail. The collective spirit of the masses is necessary for this purpose. Isolated men can sometimes find the legal expression to sum up the destruction of old social forms—when the destruction is already proceeding. At the utmost, they may widen, perhaps, the sphere of the reconstructive work, extending what is being done in a part of the country, over a larger part of the territory. But to impose the reconstruction by law is absolutely impossible, as was proved, among other examples, by the whole history of the French Revolution. Many thousands of the *laws* passed by the revolutionary Convention had not even been put into force when reaction came and flung those laws into the waste-paper basket.

During a revolution new forms of life will always germinate on the ruins of the old forms, but no Government will ever be able to find their expression *so long as these forms will not have taken a definite shape during the work itself of reconstruction* which must be going on in thousands of spots at the same time. Who guessed—who, in fact, could have guessed—before 1789 the rôle going to be played by the Municipalities and the Commune of Paris in the revolutionary events of 1789-1793? It is impossible to legislate for *the future*. All

we can do is to vaguely guess its essential tendencies and clear the road for it.

It is evident that in understanding the problem of the Social Revolution in this way, Anarchism cannot let itself be seduced by a programme that offers as its aim: "The conquest of the power now in the hands of the State."

We know that this conquest is not possible by peaceful means. The middle class will not give up its power without a struggle. It will resist. And in proportion as Socialists will become part of the Government, and share power with the middle class, their Socialism will grow paler and paler. This is, indeed, what Socialism is rapidly doing. Were this not so, the middle classes, who are very much more powerful numerically and intellectually than most Socialists imagine them to be, would not share their power with the Socialists.

On the other hand, we also know that if an insurrection succeeded in giving to France, to England, or to Germany a provisional Socialist Government, such a Government, without the spontaneous constructive activity of the people, would be absolutely powerless; and it would soon become a hindrance and a check to the revolution.

In studying the preparatory periods of revolutions, we come to the conclusion that no revolution has had its origin in the power of resistance or the power of attack of a Parliament or any other representative body. *All revolutions began among the people.* None has ever appeared armed from head to foot, like Minerva rising from the brain of Jupiter. All had, besides their period of incubation, their period of evolution, during which the masses, after having formulated very modest demands in the beginning, gradually began to conceive the necessity of more and more thorough and deeper changes: they grew more bold and daring in their conceptions of the problems of the moment, they gained confidence, and, having emerged from the lethargy of despair, they widened their programme. The "humble remonstrances" they formulated at the outset, grew step by step to be truly revolutionary demands.

In fact, it took France four years, from 1789 to 1793, to create a Republican minority which would be strong enough to impose itself.

As to the period of incubation, this is how we understand it. To begin with, isolated individuals, profoundly disgusted by

what they saw around them, rebelled separately. Many of them perished without any apparent result; but the indifference of society was shaken. Even those who were most satisfied with existing conditions and the most ignorant were brought by these separate acts of rebellion to ask themselves: "For what cause did these people, honest and full of energy, rebel and prove ready to give their lives?" Gradually it became impossible to remain indifferent: people were compelled to declare themselves for or against the aims pursued by these individuals. Social thought woke up.

Little by little, small groups of men were imbued with the same spirit of revolt. They also rebelled—sometimes with the hope of a partial success; for example, that of winning a strike and of obtaining bread for their children, or of getting rid of some hated functionary; but very often also without any hope of success: they broke into revolt simply because they could not remain patient any longer. Not one or two such revolts, but hundreds of small insurrections in France and in England preceded the Revolution. *This again was unavoidable.* Without such insurrections, no revolution has ever broken out. Without the menace conatined in such revolts, no serious concession has ever been wrung by the people from the governing classes. Without such risings, the social mind was never able to get rid of its deep-rooted prejudices, nor to embolden itself sufficiently to conceive *hope*. And *hope*—the hope of an improvement—was always the mainspring of revolutions.

The *pacific* abolition of serfdom in Russia is often mentioned as a proof of the possibility of a deep change being accomplished without a revolution. But it is forgotten, or ignored, that a long series of peasant insurrections preceded and brought about the abolition of serfdom. These revolts began as early as the "fifties," perhaps as an echo of 1848, and every year they spread more and more over Russia, while at the same time they became more and more serious and took a violent character, up till then unknown. This lasted till 1857, when Alexander II. at last issued his letter to the nobility of the Lithuanian provinces, containing a promise of liberation to the serfs. The words of Herzen: "Better give liberty from above, than wait till it comes from below"—words repeated by Alexander II. before the nobility of Moscow, in 1856—were not a mere menace: *they expressed the real state of affairs.* It was the dread of a peasant uprising, perhaps even more terrible than that of Pugatchòff in 1773, which induced the serf-owners to yield.

The same has occurred whenever a revolution drew near, and we can safely say that as a general rule the character of each revolution was determined by the character and the purpose of the insurrections that preceded it.

Consequently, to expect a *Social* Revolution to come like a Christmas-box, without being heralded by small acts of revolt and insurrections, is to cherish a vain hope. It would be shutting one's eyes to what *is* going on all round, in Europe and America, and taking no notice of the hundreds of strikes and small uprisings occurring everywhere, and gradually assuming a more widespread and a deeper character.

XV.

CONCLUSION.

What has been said in the preceding chapters will probably be sufficient to give a general idea of Anarchism, and to show the place it occupies in modern thought and its relations to modern science.

It represents an attempt to apply the generalisations obtained by the inductive-deductive method of natural sciences to the appreciation of human institutions; as also to foretell, on the basis of these appreciations, the probable aspects of the further march of mankind towards liberty, equality, and fraternity, guided by the desire to obtain the greatest possible sum of happiness for each unit in every human society.

Anarchism is the inevitable result of the intellectual movement in natural sciences which began towards the end of the eighteenth century, and, after having been retarded by the triumph of reaction in Europe after the defeat of the French Revolution, flourished anew in all its might sixty years later. Having its origin in the natural philosophy of the eighteenth century, it had not its basis completely established till after the revival of science which took place in the middle of the nineteenth century, giving new life to the study of institutions and human societies on a natural science basis.

The so-called "scientific laws," which seemed to satisfy the German metaphysicians during the first thirty years of the nineteenth century, find no room in Anarchist conceptions. Anarchism recognises no method of research but the scientific one; and it applies this method to all sciences usually described as the humanitarian sciences.

This is the scientific aspect of Anarchism.

Taking advantage of the scientific method of the exact sciences, as well as of the researches made of late under the impulse of this method, Anarchism endeavours to reconstruct all sciences concerning man, and re-examines the generally received conceptions of Law, Justice, etc. Basing itself on the new data obtained by anthropological research, and extending the work of its eighteenth-century predecessors, Anarchism has sided with the individual against the State, and with society against the

authority which, by virtue of historical inheritance, dominates society. On the basis of historical data accumulated by modern science, Anarchism has demonstrated that State authority, which steadily grows in our days, is in reality but a noxious and a useless superstructure which, for us Europeans, only dates from the fifteenth and sixteenth centuries: a superstructure built to the advantage of Landlordism, Capitalism, and Officialism, and which in ancient times has caused already the downfall of Rome and Greece and many other centres of civilisation once flourishing in the East and in Egypt.

The authority that was constituted in order to unite the nobleman, the judge, the soldier, and the priest for their mutual protection and their class advantages, and which always was an obstacle to the attempts of man to create for himself a life somewhat secure and free—this authority cannot become a weapon of enfranchisement, any more than Caesarism or Imperialism, or the Church, can become instruments of a social revolution.

In political economy, Anarchism has come to the conclusion that the evils of the present day are not caused by the capitalist appropriating for himself the "surplus value," or "net profit," but by the fact itself that "net profit" or "surplus value" is possible. Such an appropriation of the produce of human labour by the owners of capital exists only because millions of men have literally nothing to live upon, unless they sell their labour force and their intelligence at a price that will make the net profit of the capitalist and "surplus value" possible.

This is why we consider that in political economy the first chapter to be studied is the chapter on *consumption*—not that on *production;* and when a revolution breaks out, the first duty to attend to will be to remodel consumption, so that shelter, food, and clothing should be assured to one and all. As to production, it will have to be organised so that the principal needs of all the members of society should be satisfied first. This is also why Anarchism cannot look upon the coming revolution as a mere substitution of "labour cheques" for gold, nor of the State as the universal capitalist for the present capitalists. In the coming revolution, the Anarchists see a first step towards *free Communism*, untrammelled by the State.

Is Anarchism right in its conclusions? The answer will be given us by a scientific criticism of its basis on the one hand, and especially by practical life on the other. But there is one point on which without doubt Anarchism is absolutely in the right. It is when it considers the study of the social institutions as a

chapter of natural science; when it parts for ever with metaphysics; and when it takes for its method of reasoning the method that has served to build up all modern science and natural philosophy. If this method be followed, the errors into which Anarchists may have fallen will be easily recognised. But to verify our conclusions is only possible *by the scientific inductive-deductive method*, on which every science is built, and by means of which every scientific conception of the Universe has been developed.

[The End.]

GLOSSARY.

This Glossary was compiled by a friend for the German edition of "Modern Science and Anarchism," in 1904. I have now revised and extended it for this edition.

Anabaptism, a popular religious movement at the time of the Reformation. This movement was directed against the authority of the Catholic Church, but went much further than that headed by Luther. The Anabaptists preached the full liberty of the individual in religious and moral matters, while in social matters they preached equality and the abolition of private property. They repudiated also all forms of coercion—the oath, the tribunals in the shape of landlords' justice, military service, and all obedience to the Government, which they declared un-Christian. Notice of this movement is usually taken when it began to be prosecuted at Zwickau in 1520. In reality, however, it had its origin in the Wycliff movement of the fourteenth century, and in the movement of the Hussites in Bohemia, at the end of the fourteenth century. Long before Luther had posted his "Theses" on the door of the church of Wittenberg, a movement against the Church, the State, and the Law was brewing among the artisans and the peasants. It represented the left, advanced wing of the Lutheran movement, and in fact gave it its real vigour. During the Great Peasant War (1525), and with the proclamation of the Commune at Leyden by Thomas Münster (1535), the Anabaptists broke out in open rebellion against all established authorities. Both of these rebellions were drowned in blood, thousands of Anabaptists being executed or burned at the stake. Later on, a similar movement was transported by emigrants to England, where it took a much more moderate form. It was also continued in Austria, in Holland, in Russia (through German immigrants), and even in Greenland, taking in all these countries various more or less Communistic forms. (See the German works of Keller, Hase, and Cornelius; and an excellent little English summing-up in Richard Heath's "Anabaptism," 1895.)

Anthropology, a science which studies man: his physical constitution in different climates, his races, his physical development, and the evolution of his institutions and social, moral, and religious conceptions. The

institutions and the social, moral, and religious conceptions are, however, often considered as part of *Ethnology*. By "Anthropological School" we mean those who, in the second half of the nineteenth century, studied the origins and evolution of conceptions and social institutions from the point of view of natural science, without appealing to supernatural intuition, and without trying to conceal the gaps in our knowledge by vague and incomprehensible metaphysical words.

Babeuf, François Noël (1764-1797), French Communist, took part in the Revolution, and published a paper, *Tribun du Peuple*, in which he preached the social revolution. After the fall of the Robespierre party, he organised, with Sylvain Maréchal, Darthé, and several others, a secret Communist society, which intended to overthrow the Government and to constitute a Communist Directorate. The conspiracy was betrayed, and the leaders were shot in 1797.

Bacon, Francis (1561-1626), great English philosopher, known as the father of the "inductive" method of scientific research, because he was the first to show that research and discovery will only be able to progress when the human mind has grown accustomed to consider *observation* and free, methodical, *experimental* research as the only means to discover natural laws and the true causes of phenomena. Scholastic wisdom, which only juggled with words, had to be given up, and true knowledge be acquired through *induction—i.e.*, through the closest study of the separate phenomena themselves, before generalisations are "induced." This was the fundamental idea of all his work, and this is why Bacon is truly considered as the father of modern science. (See below, "Inductive-Deductive Method.")

Bain, Alexander (born 1818), one of the chief English representatives of physiological psychology. His chief works were: "Mind and Body," "The Senses and the Intellect."

Bakunin, Michael (1814-1876), political writer and an indefatigable revolutionist. Took part in all the revolutionary and Socialist movements of his own times, in Germany, Switzerland, Italy, Austria, and Poland. Had a prominent part in the Dresden revolution of 1849. Was condemned after its defeat to lifelong imprisonment, and extradited by the Saxon Government to Austria. After a two years' confinement in an Austrian fortress, where he was chained to the wall, he was surrendered to the Russian Tsar, Nicholas I., who kept him imprisoned in the fortress of St. Petersburg till 1856. Released after the death of Nicholas I., he was banished to Siberia, where he was very well received by the then Governor-General of Eastern Siberia, N. Muravioff-Amursky. Escaping from Vladivostok in 1862, he came to London, and took the liveliest part in the European revolutionary agitation. He soon became a member of the International Working Men's Association, joining the Jura Federation, which, in opposition to the General Council of the International, was the stronghold of the Federalist, anti-Statist, revolutionary, and

direct-economic-struggle tendency in the Association. He thus came in conflict with Marx and Engels, who were the leading spirits of the London General Council, and were working then to divert the Association from the direct economic struggle, and to make of it a Parliamentary political party. At the Hague Congress of the International, in 1872, Marx succeeded, with the aid of a fictitious majority, in having the Jura Federation and its leading spirits, Bakunin and James Guillaume, excluded from the International; whereupon the Jura, the Spanish, the Italian, and the East Belgian (Vesdre) Federations broke entirely with the General Council, which was transferred next year to New York, where it died; while the Federations just mentioned, concluding a federative alliance among themselves, and abolishing all central authority, continued the work of the International Working Men's Association on federalist principles, and up to 1878 held regular yearly Congresses, until this became impossible, owing to Government prosecutions. During this period Bakunin wrote a number of pamphlets in which he developed the principles of Anarchism, the chief of which are: "God and the State," "The State Idea and Anarchism," "Letters to a Frenchman" about the war of 1870-71, "The Knouto-Germanic Empire," etc. An exhaustive biography of Bakunin has been written by Dr. M. Nettlau, in three large volumes; a short abstract of this work has also been published.

Bentham, Jeremy (1748-1832), English political writer, who received French citizenship from the Republican Convention for his work in the reform of legislation. Founder of the English ethical school of "Utilitarianism," which considers the aim of all social organisation to be the attainment of the greatest happiness for the greatest number. J. S. Mill subsequently developed these ideas in his well-known essay, entitled "Utilitarianism."

Bernard, Claude (1813-1878), great French physiologist, widely known for his discoveries in physiology, and especially for his experimental work tending to lay down the bases for a *physiological* psychology. Chief works: "Lessons in Experimental Physiology," 1855; on toxical substances, 1857; and on the physiology of the nervous system, 1858.

Berthelot, Marcelin (1827-1907), French chemist, opened a new field of research by his wonderful syntheses of organic bodies—that is, by producing in the laboratory, through the combination of chemical elements (oxygen, hydrogen, nitrogen, and carbon), various substances which enter into the composition of living bodies, or are produced by such bodies: hydro-carbons, oils, fats, and so on. All his work was a beautiful illustration of the unity of physical forces, which represents the greatest conquest of science in the course of the nineteenth century, and of that other great conquest, the transformation of mechanical movement into heat. He therefore retained till his death a firm belief in the unlimited power of science to give well-being to mankind, and in his philosophy and in its application to life he remained true to the

best traditions of the Encyclopaedists. He published during his lifetime no less than 1,200 scientific memoirs, his chief works being: "Organic Chemistry Based on Synthesis," 1860; "Lectures on the General Methods of Synthesis," 1864; "Lectures on Isomery," 1865; "Chemical Synthesis," 1875.

Blanc, Louis (1811-1882), French Socialist and historian. He proved that the misery of the masses was caused by individualism and the commercial and industrial competition which the latter leads to, and he advocated the reconstruction of society upon the basis of solidarity, the first step being the socialisation of the instruments of production. He wanted, therefore, the "Organisation of Labour," the State helping in promoting social workshops. He was thus, with Pecqueur and Vidal, one of the first promoters of Socialism organised by the State. During the Revolution of 1848 he became a member of the Provisional Government and the chairman of a special committee for the re-organisation of production. His chief works are: "Organisation of Labour"; a History of the French Revolution, in eight volumes, written from the Jacobinist (Robespierrist) point of view; a History of Ten Years (1830-1840); etc. After the *coup d'état* of Napoleon III. he was for many years a refugee in England.

Brehons.—Among all the free stems, Celtic, Saxon, Scandinavian, Slavonian, Finnish, and so on, which did not belong to the Roman Empire, and had no written law during the first centuries of the Christian era, the tradition of the law—that is, the decisions previously taken in different cases by the folkmotes—was kept in memory by special men who usually kept that knowledge either in their families or in special guilds. It was their duty to recite the traditional common law during the popular festivals which were kept in connection with the great folkmotes of large portions of the federated stems, and for that purpose the law was often put in the shape of verses, or *triads*, to facilitate memory. This habit is still widely in use in many parts of Western Asia. In Ireland, the keepers of the law were known as the *Brehons*, and they combined this function with sacerdotal functions. The collection of the Irish common law, compiled in the middle of the fifth century, and known as the *Senchus Mor* ("Great Antiquity"), is one of the most remarkable documents among the many similar collections of unwritten common law dating from that period. Modern historians continually represent Brehons and similar reciters of the law as *law-makers;* but this was not the case. The law-makers were the folkmotes—the *Brehons*, the *Knyazes* of the Slavonians, etc., being only *the keepers of law in its old forms.*

Büchner, Ludwig (1824-1899), German naturalist and philosopher, especially renowned for his work "Force and Matter," which represented an attempt to give, on the basis of modern knowledge in natural science, and in a perfectly popular and accessible form, the substance of an atomist-materialistic comprehension of the Universe. Hundreds of

thousands of copies of this work were circulated in Germany, France, and Russia. He also wrote a work "Love" (describing sociability and sympathetic instincts in animals); "Man and his Position in Nature" (also very widely read in Germany and France), a popular exposition of Darwinism; "Love and Love Relations in the Animal World," 1885; "Last Words on Materialism," London, 1901; etc. By all these works he has powerfully contributed to the diffusion of a materialistic—*i.e.*, dynamic—comprehension of Nature.

Buffon, Georges (1707-1788), great French naturalist. Made the first attempt to construct a full system of Nature and to give a full description of the animal world on the bases of comparative anatomy. One of the chief services he has rendered was that, notwithstanding a severe opposition and the menaces of the Church, he put an end to the intervention of theology in questions of natural science. Chief work: "Natural History."

Buonarroti, Filippo (1761-1837), Italian lawyer. Was influenced by the ideas of Rousseau, and was expelled from Italy, Corsica, and Sardinia, for propagating revolutionary ideas. Came to Paris during the Great Revolution, and joined Babeuf for the propaganda of revolutionary Communism. Was involved in the Babeuf conspiracy in 1795, and wrote a description of it, "The Conspiracy of Babeuf." Later on was the chief inspirer of the secret Communist societies in France and Italy in the "twenties" and "thirties" of the nineteenth century.

Byelaeff (1810-1873), a Russian historian and student of old Russian law; has told better than any other historian, in four small volumes ("Tales from Russian History"), the inner life of the mediæval republics of Novgorod and Pskov. Has also written an excellent history of the Russian Peasantry and a work on Russian annals.

Cabet, Etienne (1788-1856), French Communist, who developed his ideas in his journal, *Le Populaire;* and published in 1842 his chief work, "A Journey to Icaria," in which he developed in full his theory of authoritarian State Communism. This work was widely read and went through many editions, that of 1856 containing an analysis of the predecessors of Cabet, including those of the French Revolution. In 1848 he attempted to put his ideas into practice in Texas, and later on in the State of Illinois, but failed. Still, the colony, "Young Icaria," continued to exist in the "eighties" of last century.

Clausius, Rudolf (1822-1888), German physicist, renowned for his studies on optics, electricity, and especially the mechanical theory of heat, of which he established one of the fundamental laws.

Comte, Auguste (1798-1857), the founder of Positivism. His "Course of Positive Philosophy" is an attempt at working out a synthetic philosophy of all human knowledge on a purely scientific foundation. *Positive* philosophy meant, in Comte's conception, the following:—He established that all human knowledge began first as *theological* conceptions (for instance, man considers thunder as an expression of

discontent of a divinity, and he explains all facts of Nature as acts of the will of various gods). Then man goes over to the *metaphysical* phase, and explains all acts of Nature by some abstract *forces* ("vital force," "soul of Nature," etc.); and finally he reaches the *positive* phase when he gives up the research of "final causes" and "substances," and tries only to find out the laws of the phenomena which should merely express the *relations* between them and their *succession*. In his second work, "Positive Politics," Comte, however—contrary to the very essence of his philosophy—endeavoured to lay the foundation of a *religion*, of which the divinity was "Humanity." The Positive philosophy of Comte exercised a deep influence upon all the science and philosophy of the second half of the nineteenth century.

Considérant, Victor (1802-1893), French Socialist writer, follower of Fourier, whose work he continued. Edited *La Phalange* in 1837, and *La Démocratie Pacifique* in 1845. Tried later on to found a *phalanstère* in Texas. Developed the ideas of Fourier in a series of works of great value, of which the chief are: "Social Destiny," 1834; "Theory of Natural and Attractive Education," 1835; "Principles of Socialism: Manifesto of the Pacific Democracy," published in 1843, prosecuted, and published in a second edition in 1847—its economical principles, as shown by W. Tcherkesoff, represent the substance of those of the "Communist Manifesto" of Marx and Engels; "Socialism Before the Old World," 1848, an excellent review of the different schools of Socialism.

Darwin, Charles (1809-1882), the most renowned naturalist of our own times. Science owes to him that he proved the variability of the species of plants and animals by such a rich mass of facts that the whole science of organic beings (Biology) felt the effect of his work. Buffon and Lamarck in 1801-9 had already maintained the variability of species and the descent of all species of plants and animals from some common ancestors. Darwin worked out this hypothesis on a scientific basis, and endeavoured to show that, given the immense number of individual variations which continually appear in every species, natural selection in the struggle for life (or the survival of the fittest) would be quite sufficient to explain the gradual development of all the existing species of plants and animals, including man, and to account for the wonderful accommodation of most of them to their surroundings from the action alone of natural causes, without the intervention of a guiding power. His theories were admirably explained in a very simple form by Huxley ("Lectures to Working Men"). His two chief works are "Origin of Species," 1859, and "Descent of Man," 1871.

Diderot, Denis (1713-1784), French philosopher. After having been prosecuted for his "Philosophical Thoughts," 1746, and imprisoned for his "Letters on the Blind," 1749, he conceived and realised the idea of the "General Encyclopaedia," an immense work for that epoch, which he succeeded in bringing to an end in twenty-two years (1751-1772), with the

collaboration of D'Alembert, Holbach, and all the best thinkers and men of science of the time—notwithstanding the intrigues directed against him by both the clergy and the civil authorities.

Encyclopaedists.—This is the name given to the founders of, the contributors to, and the publishers of the great French "Encyclopaedia" (1751). The most prominent among them were *D'Alembert* and *Diderot.* This work was of immense importance for the philosophical development of Europe, because not only was it an endeavour to give the whole of the knowledge of the day in Mathematics, Natural Sciences, History, Art and Literature, all treated in an impartial way; but it also was the organ of all the thinkers of that time for the advanced, irreligious, rationalist thought of France in the eighteenth century. The name of Encyclopaedists is also extended to all those who shared their ideas.

Fechner, Gustav (1801-1887), German physiologist and philosopher. Although a metaphysician and a follower of Schelling, he began to work out physical psychology on a purely experimental ground. Matter and Mind are for him of the same nature, and only represent for the human understanding two different views of the same phenomena. Their laws are the same. His "Elements of Psycho-Physics," an epoch-making work, appeared in 1860.

Fourier, François Marie Charles (1772-1837), French Socialist writer; with Robert Owen and Saint Simon, one of the three chief founders of modern Socialism. The chief idea of his theory was: A full development of human nature, free of all artificial fetters, is the absolutely necessary condition for the attainment of happiness and virtue in society, while misery and crime are the consequences of the unnatural constraint which present society imposes upon man, even for permitting him to work in order to satisfy his needs. The necessity of a reconstruction of society on the basis of intelligent association follows from these principles. Chief works: "Traité des Quatre Mouvements," 1808; "Le Nouveau Monde Industriel," 1829. An important school of Socialism, which included among its advocates Considérant, Leroux, and many others, was developed by his pupils. For information concerning them, see Kirkup's "History of Socialism."

Godwin, William (1756-1836), English political writer. His principal work was "An Enquiry Concerning Political Justice and its Influence on General Virtue and Happiness" (2 vols., London, 1793), in which he was the first to expound the ideas of Anarchist Communism. By "political" justice he understands the realisation of the principles of morality and truth in the life of the community. He shows in his work that a Government, by the mere fact of its existence—by its very nature—stands in the way of the development of moral habits; so also private ownership; and he foresees the time when each one, free from coercion and acting in accordance with his own free will, will act for the good of the community—all being led in their actions by the principles of pure

reason. Having been very nearly involved in a prosecution with his friends, accused of Jacobinism and Republicanism, Godwin left out of the second edition of his work on Political Justice all that he had written in a Communist sense in the first edition.

Grove, William Robert (1811-1896), an English physicist; wrote in 1842 a most remarkable memoir, and in 1856 a book, on the unity of the physical forces, in which he proved that sound, heat, light, electricity, magnetism, and chemical action are not separate "substances" or "entities," as they had been described till then, but are merely different forms of vibrations of the molecules of which all physical bodies are made up. All these different forms of vibrations (formerly called *forces*) can be transformed into one another; and all of them are but different modes of mechanical movement. A mechanical mass-movement, such as the fall of a hammer on the anvil, or the rotation of the wheels of a train when a brake is applied, can produce all these modes of movement: sound, heat, light, electricity, and magnetism. And *vice versâ*, all these kinds of molecular movement—sound, heat, light, electricity, magnetism, and chemical action—can be transformed into one another (heat—into light, or electricity, etc.), or into mass-movements of physical bodies, as we see in our steam engines and electrical railways. Grove also had the courage to ask the question whether universal gravitation is not a mere resultant of all these molecular vibrations going on all over the universe.

Haeckel, Ernst (born 1834), German biologist and philosopher. He was one of the first and one of the most enthusiastic followers of Darwin, and soon after the appearance of "Origin of Species" he published (in 1866) a most remarkable work, "General Morphology," followed by the "Natural History of Creation," in which he made the first attempt to find out the different stages of evolution from the simplest organisms up to man. In his later years he wrote two works, widely circulated now, "Monism as a Link between Religion and Science" and "The Riddle of the Universe," in which he cast aside the religious dualism which opposes the heavens to the earth, the soul to the body, and so on; but instead of coming to a purely dynamic conception of the universe, as might have been expected from his previous works, he came to the metaphysical (Hegelian) conception of the "Spirit" being an emanation of "Matter."

Hegel, Georg Wilhelm (1770-1831), a German philosopher, whose ideas exercised in Germany a very deep influence on the thought of the nineteenth century during the period of reaction after the defeat of the Great French Revolution. His philosophical system divides itself into three cycles of thought. The first is Logic—the science of the "Idea in itself" *(Idee an sich)*. In the second part, the Philosophy of Nature, the Idea is treated in its "being," as something that has taken the form of its contradiction—*i.e.*, of Nature and its beings and phenomena. And in the third part. the Philosophy of the Mind, the process is described by

which the Idea, which in Logic was the "Idea in itself," and in Nature the "Idea out of itself" *(Idee ausser sich)*, now appears as "The Mind" —as the "Idea in and for itself" *(Idee an und für sich)*. These three forms of the Idea are known as the thesis, the antithesis, and the synthesis. The evil which this philosophy has done in driving scientific research out of the sound ways it had opened by the end of the eighteenth century, and giving a new authority both to the Biblical interpretation of Nature and to the reign of sweeping generalisations based upon the use of metaphysical "words" having a vague and floating sense—can be best appreciated when we see how all the discoveries which were already prepared by the end of the eighteenth century were delayed in appearing for half a century; and also when we see the influence of this philosophy in political matters—the Hegelians maintaining that "all that exists is reasonable," and thus excusing the worst forms of political and religious reaction.

Helmholtz, Hermann-Ludwig (1821-1894), a great German physiologist and physicist. Has done very much for developing and spreading the mechanical comprehension of all physiological activity, and the idea of the unity of physical forces.

Herzen, Alexander (1812-1870), Russian political writer. After having been interned in an eastern province, left Russia and went to Italy and France, where he was friendly with all the advanced Socialists and Radicals. After the defeat of the Revolution of 1848, aided Proudhon in starting the newspaper *Le Peuple*. Expelled from France, went to England, where he founded the first "Free Russian Press," and at the end of the "fifties" began to publish a Russian paper, *Kólokol* (The Bell), in collaboration with his great friend Ogareff and Turguéneff, and later on with Bakunin. This paper, in which Herzen (in an admirable style) energetically fought for the abolition of serfdom and laid bare all the horrors of the absolute power, won a great reputation and had a great influence in Russia at the time of the liberation of the serfs. In 1863, when the Polish uprising began, Herzen and Bakunin warmly took up its defence. With the return of reaction the same year, the *Kólokol's* influence came to an end. On account of his wide knowledge of history and his philosophical training, Herzen was one of the best political writers of his time in Europe; and his "Letters from France and Italy" and "From the Other Bank" ("De l'autre rive"), written after the defeat of the movements of 1848, are real works of art, apart from their political meaning; the same applies to his autobiography, "Past and Thoughts."

Hobbes, Thomas (1588-1679), one of the most original of English political writers and philosophers. His chief works were: "Leviathan," "De Cive," "De Corpore Politico." Right, he maintained, is force: there is nothing that would be right or wrong in itself. He considered the savages as creatures continually struggling with each other, and saw

in the fear that men had of each other, and in the necessity of getting out of the misery of their primitive conditions, the chief cause of the origin of the State. Consequently, he was a fierce champion of the absolute power of kings, who had, according to his assertions, established peace among the wild stems, and thus allowed them to reach better conditions. On the other hand, he was a resolute enemy of the Church as a political power. He was the first to formulate an absolutely irreligious, materialistic conception of the Universe.

Holbach, Paul (1723-1789), French philosopher, one of the Encyclopaedists, who worked to establish a comprehensible system of knowledge of Nature and man upon a decidedly materialist basis. He did it in his principal work, "Système de la Nature." In his other works, "La Morale Universelle" and "La Politique Naturelle," he demonstrated that religion is not only useless, but is noxious for public morality and the happiness of the people.

Hutcheson, Francis (1694-1747), one of the chief representatives of the so-called Scotch philosophical school, which based its system of ethics on the principle of mutual sympathy. He endeavoured to prove that although we divide the motives by which our will is affected into egoistic and altruistic motives, nevertheless we approve only the latter and the actions inspired by them. This is the consequence of a "moral sense" with which Nature has endowed us. He developed these ideas in his works: "Enquiry into the Origins of Our Ideas of Beauty and Virtue," "Essay on Nature," and "Conduct of Passions and Affections."

Huxley, Thomas (1825-1895), English biologist, especially known for the gallant defence he made of Darwin's theory of evolution, at a time when Darwin was wildly assailed on all sides. Chief works: "Man's Place in Nature" (1863) and "Comparative Anatomy."

Inductive-Deductive Method—the method of modern science. It consists of the following:—(1) By observation and experiment we try to gain a knowledge of the phenomena which we propose to study. (2) We discuss the accumulated facts, and see if they do not lead (Latin, *inducere*) to some generalisation, or to some hypothesis which would link together the mass of facts (*e.g.*, the hypothesis which Laplace made to explain the facts offered by the structure of our solar system; or Darwin's hypothesis of descent, by evolution from a common stock, of all the plants and animal species which exist or have existed in past geological periods on the earth). (3) Then we deduce conclusions from this hypothesis (we make *deductions*), leading us to foresee new facts; and these conclusions must prove to be correct, if the induction—the generalisation—was correct. (4) We compare our deductions with the facts already accumulated (§ 1). If necessary, new observations and experiments are made, in order to ascertain whether our hypothesis is in accordance with reality, and the hypothesis is either rejected or modified, until we find one which agrees with the present state of our knowledge. A hypothesis becomes a

theory only after such a verification has been made; and it may be considered as a natural *law* only after it has stood the above test, and the cause, the reason of the hypothesis, has been discovered. Thus we describe Newton's induction of universal gravitation as a proved theory, because it has been confirmed by an enormous mass of facts, many of which seemed to be contradictory at first sight. And although we often speak also of the *law* of gravitation, this way of speaking is not quite correct, as the *cause* of this universal fact of gravitation is not yet discovered: it is only foreseen.

Jacobins, or *Jacobinists*, name given to the members of a club, consisting of middle-class Radicals, which played a prominent part in the Great French Revolution of 1789-1794. It contained in its midst most of the prominent Republican revolutionists, and was very much under the influence of Robespierre. It courageously fought against the royal power; but after that fell, it also struggled against the Club of the Cordeliers, to which belonged Danton, Hébert, and the most influential members of the Commune of Paris. During the period of the Terror, the Jacobin Club became a sort of Grand Jury of accusation. After the fall of Robespierre and his party, in July, 1794, it was closed. The word "Jacobinist" is now used to describe the advocates of a powerful, centralised revolutionary Government.

Joule, James Prescott (1818-1889), English physicist; determined the mechanical equivalent of heat. (See note on that subject.)

Kant, Immanuel (1724-1804), German philosopher, whose philosophy exercised the deepest influence in the nineteenth century. In his earlier works he devoted himself chiefly to natural science, and almost at the same time as Laplace he formulated a hypothesis, quite similar to that of Laplace, of the origin of our solar system from a cooling mass of incandescent gases. His principal work, however, was his "Critique of Pure Reason." There are, according to him, two different worlds: (1) the world of physical phenomena, which we can know in space and time, but which, in accordance with his philosophy of critical, transcendental idealism, are mere phenomena having no reality in themselves; and (2) the world of inborn ideas, "the things in themselves" *(Dinge an sich)*, which we can know in time, but not in space. The enigma of a world of "things in themselves" existing behind the phenomena, he tried to solve through the moral philosophy ("Critique of Practical Reason"). In this second great work he endeavoured to prove that Reason possesses the property of dictating to itself its own laws, and that it is the duty of the moral man to follow these prescriptions of his reason—"the categorical imperative." Upon the idea of the moral conscience he based the ideas of God, Immortality, and Liberty. In his philosophy of Law he developed the idea that an absolute respect for moral liberty had to be the foundation of all society and State-life, and in the realisation of this ideal of liberty he saw the future aim of all historical development.

Kostomaroff, Nicholas (1817-1885), a brilliant Russian historian, the founder of the Federalist school in the study of Russian history.

Lamarck, Jean Baptiste (1744-1829), French naturalist. He made an attempt at giving a complete classification of both the animals and plants. Having constructed a complete system, which was based on the variability of the animal and vegetable species ("Philosophie Zoologique"), he must be considered as the chief forerunner of Darwin. He explained the variation of organisms by their capacity to accommodate themselves to their surroundings, as also by their use or disuse of their different organs—an idea which was bitterly combatted by Cuvier.

Laplace, Pierre (1749-1827), one of the greatest astronomers and mathematicians of all ages. His chief works are: "Exposition of a System of the Universe," in which he explained the probable, purely physical origin of our solar system out of a mass of incandescent gaseous matter; and "Treatise of Celestial Mechanics." He solved all problems of astronomy purely by a physical analysis.

Lavoisier, Antoine (1743-1794), great French founder of chemistry. Was the first to decompose water into its component elements, oxygen and hydrogen. Studied the theory of burning, of heat, and of fermentation. Was the first to prove the indestructibility of matter by experiment. Chief work: "Traité élémentaire de Chimie" (1789).

Lewes, George Henry (1817-1878), English physiologist and philosopher, who treated the problems of mind on a physiological basis, and was possessed of an admirable gift for popular exposition of scientific matter. Chief works: "Problems of Life and Mind" (which includes a volume given to "The Physical Basis of Mind"), "History of Philosophy," and "Physiology of Common Life."

Littré, Maximilien Emile (1801-1881), French philosopher and philologist. Was a warm follower of Auguste Comte's Positive philosophy, and did much to popularise it. Compiled the great monumental dictionary of the French language.

Lomonósoff, Mikhail (1711-1765), Russian writer in most varied branches. Author of odes, a Russian grammar, works of history, and several important works on physics, mineralogy, chemistry, and physical geography. In one of these last (on the Arctic regions) he expressed very definitely the mechanical theory of heat.

Lyell, Charles (1797-1875), renowned English geologist. His great work, "Principles of Geology," which has gone through many editions, was epoch-making, as it established beyond doubt, contrarily to the theories then current, the slow and gradual modifications of the earth's surface, through the accumulation of agencies now at work. He thus prepared the mind to accept the theory of evolution, advocated later on by Darwin. His work, "Antiquity of Man," published in 1863, established the great antiquity of the first human-like beings, and the fact of a Quaternary Glacial Period.

Maine, Henry (1822-1888), English student of common law, ancient and modern, and the author of a remarkable work on the early village community. Chief works: "Village Communities in the East and West," and "Lectures on the Early History of Institutions."

Marx, Karl (1818-1883), founder of the Social Democratic school of Socialism. Having left Germany as a political refugee, settled first in Paris, where he published, with Ruge, a Radical paper in German. Expelled from France in 1844, and from Belgium in 1848, he settled in London, where he was, in 1864, one of the chief founders of the International Working Men's Association, and the intellectual leader of the General Council of the Association. Chief works: "The Misery of Philosophy" (1847)—a reply to Proudhon's "Philosophy of Misery" ("Economical Contradictions"); "Communist Manifesto" (1848), (about its origin, see W. Tcherkesoff's "Pages of Socialist History," 1896, and Professor Andler's "Historical Introduction" to it, in French, 1901); and especially his principal work, "Capital," of which the first (chief) volume appeared in 1867, containing a remarkable analysis of the genesis of capital, and became the foundation of the economical ideas of Social Democracy. Two more volumes of "Capital"—the last being a posthumous work—appeared later on.

Maurer, Georg Ludwig (1796-1872), a German historian, who has put on a scientific basis the study of the old village community. Chief work: "Einleitung zur Geschichte der Mark-, Hof-, Dorf-fund Stadt-Verfassung."

Mechanical Theory of Heat, one of the greatest acquisitions of modern science. It consists in its being now proved that all the phenomena which we describe as heat phenomena (the heating of a body, its cooling, its melting, its boiling, the transformation of a liquid into a gaseous state, etc.) are the results of vibrations of the molecules of physical bodies. When the sum of these vibrational movements (invisible to the eye) which are going on in, let us say, a piece of iron, increases, the temperature of that piece of iron increases also. And *vice versâ*. Heat is thus a mood of motion. This is why we can produce heat by friction. The mass-movement of a train which is brought to a state of rest by powerful brakes, is spent in the friction of the wheels of the train upon the rails, and there it appears as heat in the heated rails and as sparks thrown from under the wheels. The quantity of mechanical force which is required to heat one pound of water by so many degrees can be measured; it has been measured with great accuracy; and this quantity is known as "the mechanical equivalent of heat." The mechanical theory of heat was foreseen, and even partly expressed, in the eighteenth century. Later on, in the "twenties" of the nineteenth century, it was expressed by *Séguin* senior, who had already made the necessary measurements. *Rudolf Meyer*, a German doctor, was the first to formulate it, in 1845, in a comprehensible and correct form; but he was not listened to.

Joule was the first to measure with accuracy the mechanical equivalent of heat (in 1856). Since 1860, the mechanical theory of heat has been considered as one of the greatest conquests of science in the nineteenth century. Its applications both in science and industry are countless.

Mendéléeff, Dmitri (1834-1907), a remarkable Russian chemist, best known for his discovery of the "Periodic Law of Elements." It is known that all the bodies which we find on the earth's surface, whether living or dead matter, are composed of some eighty or ninety different bodies, which cannot be decomposed, and therefore are named *elements*. These enter among themselves into an infinite number of combinations. The *elements*, Mendéléeff discovered, if we write them down in the order of the increasing complexity of their molecules, can be disposed in a table containing eight vertical columns and twelve horizontal lines. If such a table is made, it appears that all the elements placed in each column will have some chemical properties in common; so also all the elements inscribed in each horizontal row—the energy of the chemical properties increasing in each row as you go from Column 1 to Column 8. This suggests the idea (1) that the molecule of each element is probably a complex system of still smaller molecules (or rather atoms) in continual movement round each other—like the planets Jupiter or Saturn, with their several moons; and (2) that in the structure of these systems there is a certain *periodicity*, *i.e.*, a repetition of some scheme of structure. This discovery has immensely helped the development of chemistry. His conception of the cosmical ether as matter, the atoms of which are in vibrations so rapid that they cannot be fixed and kept in more or less permanent chemical combinations, though yet less known, is equally important.

Mill, John Stuart (1806-1873), famous English economist and philosopher. One of the most eminent representatives of "empiricism," *i.e.*, of research based on observation. In his "System of Logic" he has admirably developed the theory of the inductive method. Author of "Principles of Political Economy," "Essay on Liberty," and "Representative Government."

Moleschott, Jacob (1822-1893), a materialist physiologist of Dutch origin. Wrote, in German, many works to popularise materialist philosophy; one of them, "The Cycle of Life" ("Kreislauf des Lebens"), had a wide renown.

Owen, Robert (1771-1858), with Fourier and Saint-Simon one of the three great founders of modern Socialism—especially of associated Trade Unionism and federated Co-operation. Exercised a deep influence upon his contemporaries in England, both among the working men and the intellectuals, inspiring both with higher ideals of equality, freedom, and justice. The severe prosecutions which were begun against his followers in 1831, after he had started the great Union of all trades—which was

intended to combine the workers of all the civilised countries, and was thus a precursor of the International Working Men's Association—compelled Owen and his associates to limit their activities to peaceful Co-operation and moderate Trade Unionism. His principal works were: "Outline of a Rational System," "The Book of the New Moral World," and "Revolution in the Mind and Practice of the Human Race"; but he issued countless smaller writings and papers, and created quite a school of English Socialists, unfortunately forgotten now.

Proudhon, Pierre (1809-1865), French Socialist, the most powerful critic of the capitalist system and the State, as well as the authoritarian systems of Communism and Socialism. About his own system of Mutualism, see the text of this book. Chief works: "What is Property?" "System of Economic Contradictions"; "Confessions of a Revolutionist"; "General Idea about the Revolution in the Nineteenth Century"; "On the Political Capacity of the Working Class"; etc.

Ricardo, David (1772-1823), an English economist of the school considered as "classical" by the Universities. He fully developed, after Adam Smith, the theory that the amount of necessary labour is the standard and measure of the exchange value of all marketable goods; and also a theory of ground rent, to which the Universities attribute a scientific value. His chief work was "On the Principles of Political Economy and Taxation" (1817).

Rousseau, Jean Jacques (1712-1778), French philosoper. A forerunner of the Great Revolution, whose writings, together with those of *Mably*, greatly influenced most of those who stood foremost in the Revolution, especially in its Jacobinist wing. He preached the return to a simple and natural life, equality, democratic and republican institutions, and a sound education embodying a knowledge of both science and manual work; and he endeavoured to lay the foundations of a natural religion which might supersede Church Christianity. He has had an ardent follower in Leo Tolstoy. Chief works: "On the Origin of Inequality among Men," "Le Contrat Social," "Emile," "Le Vicaire Savoyard," "The New Heloïse," and "Mes Confessions."

Saint-Simon (1760-1825), with Fourier and Robert Owen one of the three great founders of nineteenth-century Socialism. He endeavoured to base his conclusions upon a solid study of the economic relations, such as they exist in society, and upon the laws of their development; and through that his teachings—"Saint-Simonism"—found a great number of followers, and inspired a great number of the best thinkers (Auguste Comte), historians (Augustin Thierry), economists (Sismondi), and industrial philanthropists of the nineteenth century. His practical conclusions were leading him to an association of Capital and Labour. All the leading theoretical principles of so-called "Scientific Socialism," or "Marxism," are but a further development of the theoretical ideas advocated by the Saint-Simonists.

Schelling, Friedrich (1775-1854), a German philosopher of the period of reaction. Attempted to build up a system which would embody all Nature; but, partly from want of a knowledge of natural science, and partly from preconceived ideas, stranded in metaphysics.

Séguin, Marc (1786-1875), French engineer. Was the first to measure the mechanical equivalent of heat.

Shaman is the name given to sorcerers by the different populations of Northern Asia. They are supposed to deal with the dark forces of Nature. By their incantations and dances they are supposed to conjure illness and all sorts of misfortunes.

Smith, Adam (1723-1790), English economist and philosopher; founder of Political Economy as a science based on observation and on the inductive methods, which he developed in his classical work, "The Wealth of Nations." In that work he considered wealth as the product of labour, and criticised the many obstacles which Governments at that time put in the way of the growth of industry and commerce—thus becoming the founder of the so-called "Liberal school" of Political Economy. In a far less known, very much boycotted, and yet very deep work, "The Theory of Moral Sentiments," he wrote a full theory of Ethics based on the common observations of mutual sympathy.

Spencer, Herbert (1820-1903), English philosopher who developed a full system of synthetic philosophy on a materialistic basis, embodied in the following works: "First Principles," "Principles of Biology," "Principles of Psychology," "Principles of Sociology," "Ethics." Also "The Man versus the State"; an excellent little work on Education; a polemics against Weismann upon the direct action of surroundings and natural selection; and so on. In his "Principles of Biology" he developed a full theory of evolution, based chiefly on the lines of Lamarck's "Transformism," *i.e.*, on the direct action of the surroundings modifying the organisms in the sense of adaptation to their surroundings ("direct adaptation"),—natural selection ("the indirect adaptation") only coming in to aid the preservation of the best adapted ("survival of the fittest"), and to give stability to the acquired adaptation.

Thierry, Augustin (1795-1856), a renowned French historian, who combined an admirable descriptive talent with a deep study and comprehension of the primitive institutions of the so-called "barbarian" period. His "Letters on the History of France" give the best key to a comprehension of this period, and of the subsequent period of independent city-republics in France. He also wrote a history of the Norman Conquest of England.

Vogt, Karl (1817-1895), Swiss naturalist and politician, professor of geology and zoology. Took part in the Revolution of 1848 in Germany. Author of several purely scientific works, and an excellent populariser. Materialist and follower of Darwin after the appearance of "Origin of

Species." His little work, "A Pitman's Faith and Science" ("Köhlerglaube und Wissenschaft") exercised a great influence during the natural science revival of 1856-62. Other works: "Zoological Letters," "Old and New from the Life of Animals and Men," "Lectures on Man,"—probably none of them translated into English.

Wallace, Alfred Russel (born 1822), English naturalist, who, contemporaneously with Darwin, in 1857, developed the theory of evolution of species through natural selection in the struggle for life. His work, "Darwinism," is an admirable exposition of the subject, popularly written and thoroughly scientific. In his youth he came under the influence of Robert Owen's teachings, and is still in favour of land nationalisation.

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